STIC Search Report
Biotech-Chem Library

STIC Database Tracking Number: 143653

TO: Sharon Turner **Location: rem/4d54/4c70** **Art Unit: 1647** **Monday, March 28, 2005** **Case Serial Number: 09/357349**	**From: Mary Jane Ruhl** **Location: Biotech-Chem Library** **Remsen 1-A-62** **Phone: 571-272-2524** **maryjane.ruhl@uspto.gov**

Search Notes

Examiner Turner,

Here are the results for your recent search request.

Please feel free to contact me if you have any questions about these results.

Thank you for using STIC services. We appreciate the opportunity to serve you.

Sincerely,

Mary Jane Ruhl
Technical Information Specialist
STIC
Remsen 1-A-62
Ext. 22524

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:17:42 ; Search time 50.3565 Seconds
(without alignments)
867.890 Million cell updates/sec

Title: US-09-357-349D-3
Perfect score: 601
Sequence: 1 AGGPGSRARAAGARGCRLRS.....VNSTWRTVDRLSATACGCLG 113

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	601	100.0	113	3	AAY84586	Aay84586 A first p
2	601	100.0	113	3	AAY68713	Aay68713 Amino aci
3	601	100.0	113	5	ABG30697	Abg30697 Human art
4	601	100.0	113	5	ABB82398	Abb82398 Human mat
5	601	100.0	113	5	AAG79607	Aag79607 Human var
6	601	100.0	113	5	ABJ15112	Abj15112 Pre-pro-
7	601	100.0	113	8	ADR16436	Adr16436 Human neu
8	601	100.0	114	5	ABJ15134	Abj15134 Neublasti
9	601	100.0	114	5	ABJ15132	Abj15132 Synthetic
10	601	100.0	116	3	AAY84587	Aay84587 A second
11	601	100.0	116	3	AAY68712	Aay68712 Amino aci
12	601	100.0	116	5	ABB82397	Abb82397 Human mat
13	601	100.0	116	5	ABJ15111	Abj15111 Pre-pro-
14	601	100.0	116	8	ADR16441	Adr16441 Neublasti
15	601	100.0	135	5	ABJ15133	Abj15133 Synthetic
16	601	100.0	135	5	ABJ15135	Abj15135 HisNeubla
17	601	100.0	135	8	ADR16468	Adr16468 His-tagge
18	601	100.0	139	3	AAY45011	Aay45011 Partial h
19	601	100.0	140	3	AAY84588	Aay84588 A third p
20	601	100.0	140	3	AAY68711	Aay68711 Amino aci
21	601	100.0	140	5	ABB82396	Abb82396 Human neu
22	601	100.0	140	5	ABJ15110	Abj15110 Pre-pro-
23	601	100.0	140	8	ADR16440	Adr16440 Neublasti
24	601	100.0	159	3	AAY44774	Aay44774 Protein-2
25	601	100.0	220	3	AAY84583	Aay84583 Amino aci
26	601	100.0	220	3	AAY44776	Aay44776 Short spl
27	601	100.0	220	3	AAY68710	Aay68710 A human p
28	601	100.0	220	4	AAB50978	Aab50978 Human PRO
29	601	100.0	220	5	AAU86158	Aau86158 Human PRO
30	601	100.0	220	5	ABB84975	Abb84975 Human PRO
31	601	100.0	220	5	ABG30698	Abg30698 Human art
32	601	100.0	220	5	ABB82388	Abb82388 Human neu
33	601	100.0	220	5	ABB95581	Abb95581 Human ang
34	601	100.0	220	5	AAO22940	Aao22940 Human foe
35	601	100.0	220	6	ABU56702	Abu56702 Lung canc
36	601	100.0	220	6	ABU56539	Abu56539 Lung canc
37	601	100.0	220	6	ABU56703	Abu56703 Lung canc
38	601	100.0	220	6	ABU56540	Abu56540 Lung canc
39	601	100.0	220	6	ABU71444	Abu71444 Human neo
40	601	100.0	220	7	ADD10607	Add10607 Human sec
41	601	100.0	220	7	ADD11567	Add11567 Human sec
42	601	100.0	220	7	ADD37360	Add37360 Human sec
43	601	100.0	220	7	ADJ37343	Adj37343 Human tum
44	601	100.0	220	7	ADN39086	Adn39086 Cancer/an
45	601	100.0	220	7	ADN39084	Adn39084 Cancer/an

ALIGNMENTS

RESULT 1
AAY84586
ID AAY84586 standard; protein; 113 AA.
XX
AC AAY84586;
XX
DT 25-JUL-2000 (first entry)
XX
DE A first predicted human mature artemin polypeptide.
XX
KW Human; artemin; growth factor; neurotrophic factor; trophic support;
KW neuron; trigeminal ganglion neuron; nodose ganglion neuron;
KW superior cervical ganglion neuron; midbrain neuron; Alzheimer's disease;
KW peripheral neuropathy; amylotrophic lateral sclerosis; ischemic stroke;
KW Parkinson's disease; Huntington's disease; acute brain injury;
KW acute spinal cord injury; nervous system tumour; blastoma;
KW multiple sclerosis; infection; enteric disease; idiopathic constipation;
KW Parkinson's disease; small cell lung carcinoma.
XX
OS Homo sapiens.
XX
PN WO200018799-A1.
XX
PD 06-APR-2000.
XX
PF 29-SEP-1999; 99WO-US022604.
XX
PR 29-SEP-1998; 98US-00163283.
PR 12-NOV-1998; 98US-0108148P.
PR 22-DEC-1998; 98US-00218698.
XX
PA (UNIW) UNIV WASHINGTON.
XX
PI Milbrandt JD, Baloh RH;
XX
DR WPI; 2000-293109/25.
DR N-PSDB; AAA12543.
XX
PT Isolated artemin growth factor proteins and the nucleic acids that encode
PT them, useful for treating a range of degenerative neuronal disorders such
PT as Parkinson's disease and Huntington's disease.
XX
PS Claim 4; Fig 3A; 96pp; English.
XX
CC The present sequence represents a predicted mature human artemin growth
CC factor protein. Artemin is a neurotrophic factor that belongs to the GDNF
CC (glial cell line-derived neurotrophic factor)/neurturin/persephin family
CC of growth factors and promotes differentiation, maintains mature

CC phenotype and provides trophic support, promoting growth and survival of
CC neurons. Artemin promotes the survival of trigeminal ganglion neurons,
CC nodose ganglion neurons, superior cervical ganglion neurons and tyrosine-
CC hydroxylase-expressing dopaminergic ventral midbrain neurons. Artemin is
CC the only member of the GDNF family that binds to GFR-alpha (growth factor
CC receptor-alpha) and activates the GFR-alpha3/RET (Ret protein- tyrosine
CC kinase) receptor complex and additionally, like GDNF and neurturin,
CC artemin also binds to and activates GFRalpha1/RET. Artemin polypeptides
CC and polynucleotides are administered to treat peripheral neuropathy,
CC amylotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease,
CC Huntington's disease, ischemic stroke, acute brain injury, acute spinal
CC cord injury, a nervous system tumour (e.g. blastomas), multiple
CC sclerosis, infection or enteric disease (e.g. idiopathic constipation or
CC constipation associated with Parkinson's disease, spinal cord injury or
CC use of opiate pain killers). They may also be used to treat a patient
CC suffering from small cell lung carcinoma
XX
SQ Sequence 113 AA;

```
  Query Match             100.0%;  Score 601;  DB 3;  Length 113;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-55;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
```

RESULT 2
AAY68713
ID AAY68713 standard; protein; 113 AA.
XX
AC AAY68713;
XX
DT 05-MAY-2000 (first entry)
XX
DE Amino acid sequence of a neublastin neurotrophic factor variant NBN113.
XX
KW Neurotrophic factor; neublastin; neurodegenerative disease;
KW cerebral ischemic neuronal damage; traumatic brain injury;
KW peripheral neuropathy; Alzheimer's disease; Huntington's disease;
KW Parkinson's disease; Parkinson-Plus syndrome;
KW progressive Supranuclear Palsy; Olivopontocerebellar atrophy;
KW Shy-Drager Syndrome; Guamanian parkinsonism dementia complex;
KW amyotrophic lateral sclerosis; memory impairment; neuronal disorder;
KW neuropathy; ischemic stroke; acute brain injury;
KW acute spinal cord injury; nervous system tumour; multiple sclerosis;
KW neurotoxin exposure; metabolic disease; diabetes; renal dysfunction;
KW eye disorder.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Modified-site 95
FT /note= "glycosylated residue"
XX
PN WO200001815-A2.
XX
PD 13-JAN-2000.
XX
PF 05-JUL-1999; 99WO-DK000384.
XX
PR 06-JUL-1998; 98DK-00000904.
PR 09-JUL-1998; 98US-0092229P.
PR 19-AUG-1998; 98DK-00001048.
PR 25-AUG-1998; 98US-0097774P.
PR 06-OCT-1998; 98DK-00001265.
PR 13-OCT-1998; 98US-0103908P.
PR 02-JUL-1999; 99US-00347613.
XX
PA (NEUR-) NEUROSEARCH AS.
XX
PI Johansen TE, Blom N, Hansen C;
XX
DR WPI; 2000-171013/15.
XX
PT New isolated polypeptides, used for treating e.g. neurodegenerative
PT disease or disorder, neuronal damage or neuronal disorder of the
PT peripheral nervous system, the medulla or the spinal cord.
XX
PS Claim 14; Page 99; 106pp; English.
XX
CC The present sequence represents a variant of a neurotrophic factor
CC designated neublastin. Neublastin is a member of the glial cell line-
CC derived neurotrophic factor sub-class of the transforming growth factor-
CC beta superfamily of neurotrophic factors. Neublastin exhibits high
CC affinity for the GFR-alpha3-RET receptor complex. The polypeptides can be
CC used for treating a neurodegenerative disease or disorder, cerebral
CC ischemic neuronal damage, traumatic brain injury, peripheral neuropathy,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease, Parkinson
CC -Plus syndromes, progressive Supranuclear Palsy, Olivopontocerebellar
CC atrophy, Shy-Drager Syndrome, Guamanian parkinsonism dementia complex,
CC amyotrophic lateral sclerosis, memory impairment, or a neuronal disorder
CC of the peripheral nervous system, the medulla or the spinal cord. They
CC can also be used for treating various neuropathies. They can also be used
CC for treating ischemic stroke, acute brain injury, acute spinal cord
CC injury, nervous system tumours, multiple sclerosis, exposure to
CC neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
CC and damage caused by infectious agents, or various disorders in the eye
XX
SQ Sequence 113 AA;

```
  Query Match             100.0%;  Score 601;  DB 3;  Length 113;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-55;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
```

RESULT 3
ABG30697
ID ABG30697 standard; protein; 113 AA.
XX
AC ABG30697;
XX
DT 07-OCT-2002 (first entry)
XX
DE Human artemin mature peptide.
XX
KW Human; artemin; hyperalgesia; trauma; surgery; stroke; ischaemia;
KW infection; metabolic disease; nutritional deficiency; malignancy;
KW peripheral neuropathy; diabetic neuropathy; neuronal death;
KW neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;
KW Huntington's chorea; necrosis; neuroprotective; cerebroprotective;
KW analgesic; nootropic; protein therapy.
XX
OS Homo sapiens.
XX
PN WO200251433-A2.
XX
PD 04-JUL-2002.
XX
PF 19-DEC-2001; 2001WO-US050112.
XX
PR 22-DEC-2000; 2000US-0257601P.
XX

PA (GETH) GENENTECH INC.
XX
PI Shelton DL, Phillips HS;
XX
DR WPI; 2002-575358/61.
XX
PT Use of artemin and its agonist for manufacturing a medicament for
PT protecting neurons from injury-induced pathological changes and for
PT treating damage to neurons in a mammal without accompanying mechanical or
PT thermal hyperalgesia.
XX
PS Claim 20; Fig 1; 94pp; English.
XX
CC The invention relates to the use of artemin or its agonist in the
CC manufacture of a medicament for protecting neurons in a mammal from
CC injury-induced pathological changes without accompanying mechanical or
CC thermal hyperalgesia. Artemin and its agonist are useful for treating
CC damage to neurons in a mammal without accompanying mechanical or thermal
CC hyperalgesia, where the injury is associated with trauma, a toxic agent,
CC adverse side effects of other therapeutic agents, surgery, stroke,
CC ischaemia, infection, metabolic disease, nutritional deficiency,
CC malignancy or peripheral neuropathy (such as diabetic neuropathy).
CC Artemin may also be used to prevent neuronal death and increase neuronal
CC survival and in treating, preventing and ameliorating neurodegenerative
CC disorders such as Alzheimer's disease, Parkinson's disease, Huntington's
CC chorea, peripheral neuropathies and other conditions characterised by
CC necrosis or loss of neurons. This sequence represents a human artemin
CC mature peptide of the invention
XX
SQ Sequence 113 AA;

Query Match 100.0%; Score 601; DB 5; Length 113;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
Db 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
Db 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113

RESULT 4
ABB82398
ID ABB82398 standard; protein; 113 AA.
XX
AC ABB82398;
XX
DT 08-JAN-2003 (first entry)
XX
DE Human mature neublastin (NBN) fragment 113NBN (residues 28-140).
XX
KW NBN; neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
KW human.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Modified-site 95
FT /note= "glycosylated Asn"
XX
PN WO200278730-A2.
XX
PD 10-OCT-2002.
XX
PF 28-FEB-2002; 2002WO-US006388.
XX
PR 28-MAR-2001; 2001US-00820421.
PR 28-MAR-2001; 2001US-0287554P.
XX
PA (BIOJ) BIOGEN INC.
XX
PI Sah DWY;
XX
DR WPI; 2002-740922/80.
XX
PT Treating neuropathic pain in a subject comprises administering a
PT formulation comprising a neublastin polypeptide.
XX
PS Claim 8; Page 63; 69pp; English.
XX
CC The invention relates to treating neuropathic pain in a subject and
CC involves administering a formulation comprising a neublastin (NBN)
CC polypeptide. The method is useful for treating, preventing or delaying
CC neuropathic pain. The present sequence represents a fragment of the human
CC neublastin (NBN) mature polypeptide
XX
SQ Sequence 113 AA;

Query Match 100.0%; Score 601; DB 5; Length 113;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
Db 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
Db 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113

RESULT 5
AAG79607
ID AAG79607 standard; protein; 113 AA.
XX
AC AAG79607;
XX
DT 09-JAN-2003 (first entry)
XX
DE Human variant neublastin.
XX
KW Neublastin; human; mouse; rat; nervous system disorder; bioavailability;
KW peripheral neuropathy; neuropathic pain syndrome; trauma; GFRalpha3;
KW surgery; ischaemia; infection; metabolic disease; retinitis pigmentosa;
KW nutritional deficiency; malignancy; toxicity; traumatic lesion; retina;
KW peripheral nerve; medulla; spinal cord; multiple systems atrophy;
KW cerebral ischaemic neuronal damage; ischaemic stroke; acute brain injury;
KW tumour; multiple sclerosis; neurotoxin; diabetes; renal dysfunction;
KW Alzheimer's disease; Huntington's disease; Parkinson's disease;
KW progressive Supranuclear Palsy; Olivopontocerebellar Atrophy; OPCA;
KW Guamanian parkinsonism dementia complex; amyotrophic lateral sclerosis;
KW memory impairment; dementia; motor neuron disease; glaucoma;
KW amyotrophic lateral sclerosis; AIS; spinal muscular atrophy; eye;
KW photoreceptor loss; macular degeneration; Shy-Drager Syndrome;
KW tyrosine phosphorylation; autonomic neuron; dopaminergic neuron.
XX
OS Homo sapiens.
XX
PN WO200260929-A2.
XX
PD 08-AUG-2002.
XX
PF 25-JAN-2002; 2002WO-US002319.
XX
PR 01-FEB-2001; 2001US-0266071P.
XX
PA (BIOJ) BIOGEN INC.
XX
PI Sah DWY, Pepinsky RB, Borjack-Sjodin PA, Miller SS, Rossomando A;
XX
DR WPI; 2002-750383/81.
XX
PT New variant neublastin polypeptide useful for treating or preventing

PT nervous system disorder e.g. peripheral neuropathy or metabolic diseases,
PT comprises amino acid sequence having at least one amino acid
PT substitution, other than arginine.
XX
PS Claim 25; Page 54; 57pp; English.
XX
CC The sequences given in AAG79607-09 represent variant neublastins derived
CC from human, mouse and rat. The variant neublastin has at least one amino
CC acid substitution, other than arginine at positions 14, 39, 68 and 95.
CC The variant neublastins are used in pharmaceutical compositions for
CC treating or preventing nervous system disorders, e.g. a peripheral
CC nervous disorder such as a peripheral neuropathy, neuropathic pain
CC syndrome in a subject e.g. human. The other disorder or disease may be
CC damage of the nervous system caused by trauma, surgery, ischaemia,
CC infection, metabolic diseases, nutritional deficiency, malignancy or
CC toxic agents and genetic or idiopathic processes. They are also used for
CC treating neurodegenerative disease involving lesioned and traumatic
CC neurons, such as traumatic lesions of peripheral nerves, the medulla,
CC and/or the spinal cord, cerebral ischaemic neuronal damage, neuropathy
CC and especially peripheral neuropathy, peripheral nerve trauma or injury,
CC ischaemic stroke, acute brain injury, acute spinal cord injury, nervous
CC system tumours, multiple sclerosis, exposure to neurotoxins, metabolic
CC diseases such as diabetes or renal dysfunctions and damage caused by
CC infectious agents, neurodegenerative disorders including Alzheimer's
CC disease, Huntington's disease, Parkinson's disease, progressive
CC Supranuclear Palsy, Olivopontocerebellar Atrophy (OPCA), Shy-Drager
CC Syndrome (multiple systems atrophy), Guamanian parkinsonism dementia
CC complex, amyotrophic lateral sclerosis, or any other congenital or
CC neurodegenerative disease, and memory impairment connected to dementia
CC and for treating sensory and/or autonomic system neurons, motor neuron
CC diseases such as amyotrophic lateral sclerosis (AIS), spinal muscular
CC atrophy or to enhance nerve recovery following traumatic injury. The
CC variant neublastins are also used to treat chemotherapy-induced
CC neuropathies (such as those caused by delivery of chemotherapeutic
CC agents), toxin induced neuropathies, drug-induced neuropathies, vitamin-
CC deficiency induced neuropathies, idiopathic neuropathies and diabetic
CC neuropathies, mono-neuropathies, mono-multiple neuropathies and poly-
CC neuropathies including axonal and demyelinating neuropathies. In the
CC treatment of various disorders in the eye, including photoreceptor loss
CC in the retina in patients afflicted with macular degeneration, retinitis
CC pigmentosa or glaucoma. The neublastin, when dimerised, binds GFRalpha3,
CC stimulates tyrosine phosphorylation of a RET polypeptide, enhances neuron
CC survival, normalizes pathological changes of a neuron (preferably sensory
CC neuron) and enhances survival of an autonomic or dopaminergic neuron. The
CC polypeptide has a longer serum half-life relative to the half-life of the
CC polypeptide in the absence of the polymer, thus providing prolonged
CC bioavailability, prolonged biological activity relative to non-modified
CC or wild-type forms of neublastin
XX
SQ Sequence 113 AA;

Query Match 100.0%; Score 601; DB 5; Length 113;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
Db 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
Db 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113

RESULT 6
ABJ15112
ID ABJ15112 standard; protein; 113 AA.
XX
AC ABJ15112;
XX
DT 19-DEC-2002 (first entry)
XX
DE Pre-pro- neublastin variant SEQ ID No 12.
XX
KW Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW neublastin; ischemic neuronal damage; traumatic brain injury; diabetes;
KW peripheral neuropathy; neuropathic pain; Alzheimer's disease; glaucoma;
KW Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW memory impairment; renal disease; variant; mutant; mutein.
XX
OS Homo sapiens.
XX
PN WO200272826-A2.
XX
PD 19-SEP-2002.
XX
PF 12-MAR-2002; 2002WO-EP002691.
XX
PR 12-MAR-2001; 2001US-00804615.
XX
PA (BIOJ) BIOGEN INC.
PA (NSGE-) NS GENE AS.
XX
PI Sah DWY, Johansen TE, Rossomando A;
XX
DR WPI; 2002-713515/77.
XX
PT New truncated neublastin polypeptides lacking one or more amino-terminal
PT amino acids of a mature neublastin polypeptide useful for treating
PT neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT pain, brain injury.
XX
PS Claim 4; Page 120; 138pp; English.
XX
CC The invention relates to a truncated neublastin polypeptide comprising an
CC amino acid terminus that lacks one or more amino-terminal amino acids of
CC a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC useful for treating neurodegenerative disorders such as ischemic neuronal
CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC diseases, or glaucoma by moderating metabolism, growth, differentiation
CC or survival of a nerve or neuronal cell. This sequence is a pre-pro-
CC neublastin variant protein of the invention
XX
SQ Sequence 113 AA;

Query Match 100.0%; Score 601; DB 5; Length 113;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
Db 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
Db 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113

RESULT 7
ADR16436
ID ADR16436 standard; protein; 113 AA.
XX
AC ADR16436;
XX
DT 04-NOV-2004 (first entry)
XX
DE Human neublastin 113 (NBN113) mature amino acid sequence SEQ ID NO:2.
XX
KW polymer-conjugated dimer; neublastin; NBN; mutated neublastin;
KW neuroprotective; nootropic; antiparkinsonian; anticonvulsant; virucide;
KW analgesic; RET receptor activator; neuropathic pain;
KW neurodegenerative disease; Alzheimer's disease; Huntington's disease;
KW Parkinson's disease; Guamanian parkinsonism; dementia complex;

KW tactile allodynia; viral infection; viral associated neuropathy;
KW painful diabetic neuropathy; pain sensitivity reduction; human; NBN113.
XX
OS Homo sapiens.
XX
PN WO2004069176-A2.
XX
PD 19-AUG-2004.
XX
PF 02-FEB-2004; 2004WO-US002763.
XX
PR 31-JAN-2003; 2003US-00356264.
XX
PA (BIOG-) BIOGEN IDEC MA INC.
XX
PI Sah DW, Pepinsky RB, Boriack-Sjodin PA, Miller SS, Rossomando A;
PI Silvian L;
XX
DR WPI; 2004-625384/60.
XX
PT Polymer-conjugated dimer of mutated neublastin polypeptide useful for
PT treating neuropathic pain, comprises first and second polypeptides having
PT specific mutations.
XX
PS Claim 4; SEQ ID NO 2; 74pp; English.
XX
CC The present invention describes a polymer-conjugated dimer (I) of a
CC mutated neublastin (NBN) polypeptide comprising first and second
CC polypeptides comprising the amino acid sequence containing at least 70%
CC sequence identity with amino acids 8-113 of the 113 amino acid sequence
CC of SEQ ID NO:1 (S1, ADR16435), where the first polypeptide comprises one
CC or more amino acid substitution, insertion or fusion as compared to (S1).
CC Also described: (1) a composition (II) comprising a homodimer of NBN106-
CC N95K conjugated to three or four PEG polymer having molecular weight of
CC 10000 Da, or a mixture of two different forms of (I); (2) a nucleic acid
CC (III) encoding the first polypeptide of (I); and (3) a host cell
CC transformed with (III). (I) has neuroprotective, nootropic,
CC antiparkinsonian, anticonvulsant, virucide and analgesic activities, and
CC can be used as an activator of RET receptor. (I) is useful for treating
CC neuropathic pain in a mammal, which involves administering (I) to the
CC mammal. (I) is also useful for activating the RET receptor in a mammal,
CC which involves administering (I) to the mammal. (II) is useful for
CC treating disorders or diseases such as neurodegenerative disease
CC involving lesioned and traumatic neurons, Alzheimer's disease,
CC Huntington's disease, Parkinson's disease, Guamanian parkinsonism,
CC dementia complex, tactile allodynia, viral infections and viral
CC associated neuropathies, painful diabetic neuropathy, and for reducing
CC the loss of pain sensitivity in a subject. The present sequence
CC represents the human NBN113 amino acid sequence, which is used in the
CC exemplification of the present invention.
XX
SQ Sequence 113 AA;

Query Match 100.0%; Score 601; DB 8; Length 113;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
```

RESULT 8
ABJ15134
ID ABJ15134 standard; protein; 114 AA.
XX
AC ABJ15134;
XX
DT 19-DEC-2002 (first entry)
XX
DE Neublastin syngene plasmid protein.
XX
KW Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW neublastin; ischemic neuronal damage; traumatic brain injury; diabetes;
KW peripheral neuropathy; neuropathic pain; Alzheimer's disease; glaucoma;
KW Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW memory impairment; renal disease.
XX
OS Unidentified.
XX
PN WO200272826-A2.
XX
PD 19-SEP-2002.
XX
PF 12-MAR-2002; 2002WO-EP002691.
XX
PR 12-MAR-2001; 2001US-00804615.
XX
PA (BIOJ) BIOGEN INC.
PA (NSGE-) NS GENE AS.
XX
PI Sah DWY, Johansen TE, Rossomando A;
XX
DR WPI; 2002-713515/77.
DR N-PSDB; ABT11922.
XX
PT New truncated neublastin polypeptides lacking one or more amino-terminal
PT amino acids of a mature neublastin polypeptide useful for treating
PT neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT pain, brain injury.
XX
PS Disclosure; Fig 14; 138pp; English.
XX
CC The invention relates to a truncated neublastin polypeptide comprising an
CC amino acid terminus that lacks one or more amino-terminal amino acids of
CC a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC useful for treating neurodegenerative disorders such as ischemic neuronal
CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC diseases, or glaucoma by moderating metabolism, growth, differentiation
CC or survival of a nerve or neuronal cell. This sequence is the protein of
CC a neublastin syngene plasmid of the invention
XX
SQ Sequence 114 AA;

Query Match 100.0%; Score 601; DB 5; Length 114;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 61

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         62 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 114
```

RESULT 9
ABJ15132
ID ABJ15132 standard; protein; 114 AA.
XX
AC ABJ15132;
XX
DT 19-DEC-2002 (first entry)
XX
DE Synthetic neublastin gene SEQ ID No 54.
XX
KW Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;

KW neublastin; ischemic neuronal damage; traumatic brain injury; diabetes;
KW peripheral neuropathy; neuropathic pain; Alzheimer's disease; glaucoma;
KW Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW memory impairment; renal disease; ds.
XX
OS Unidentified.
XX
PN WO200272826-A2.
XX
PD 19-SEP-2002.
XX
PF 12-MAR-2002; 2002WO-EP002691.
XX
PR 12-MAR-2001; 2001US-00804615.
XX
PA (BIOJ) BIOGEN INC.
PA (NSGE-) NS GENE AS.
XX
PI Sah DWY, Johansen TE, Rossomando A;
XX
DR WPI; 2002-713515/77.
XX
PT New truncated neublastin polypeptides lacking one or more amino-terminal
PT amino acids of a mature neublastin polypeptide useful for treating
PT neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT pain, brain injury.
XX
PS Example 12; Page 135-136; 138pp; English.
XX
CC The invention relates to a truncated neublastin polypeptide comprising an
CC amino acid terminus that lacks one or more amino-terminal amino acids of
CC a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC useful for treating neurodegenerative disorders such as ischemic neuronal
CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC diseases, or glaucoma by moderating metabolism, growth, differentiation
CC or survival of a nerve or neuronal cell. This polynucleotide sequence is
CC a synthetic neublastin gene of the invention
XX
SQ Sequence 114 AA;

Query Match 100.0%; Score 601; DB 5; Length 114;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 61

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         62 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 114
```

RESULT 10
AAY84587
ID AAY84587 standard; protein; 116 AA.
XX
AC AAY84587;
XX
DT 25-JUL-2000 (first entry)
XX
DE A second predicted human mature artemin polypeptide.
XX
KW Human; artemin; growth factor; neurotrophic factor; trophic support;
KW neuron; trigeminal ganglion neuron; nodose ganglion neuron;
KW superior cervical ganglion neuron; midbrain neuron; Alzheimer's disease;
KW peripheral neuropathy; amylotrophic lateral sclerosis; ischemic stroke;
KW Parkinson's disease; Huntington's disease; acute brain injury;
KW acute spinal cord injury; nervous system tumour; blastoma;
KW multiple sclerosis; infection; enteric disease; idiopathic constipation;
KW Parkinson's disease; small cell lung carcinoma.
XX
OS Homo sapiens.
XX
PN WO200018799-A1.
XX
PD 06-APR-2000.
XX
PF 29-SEP-1999; 99WO-US022604.
XX
PR 29-SEP-1998; 98US-00163283.
PR 12-NOV-1998; 98US-0108148P.
PR 22-DEC-1998; 98US-00218698.
XX
PA (UNIW) UNIV WASHINGTON.
XX
PI Milbrandt JD, Baloh RH;
XX
DR WPI; 2000-293109/25.
DR N-PSDB; AAA12545.
XX
PT Isolated artemin growth factor proteins and the nucleic acids that encode
PT them, useful for treating a range of degenerative neuronal disorders such
PT as Parkinson's disease and Huntington's disease.
XX
PS Claim 4; Fig 3B; 96pp; English.
XX
CC The present sequence represents a predicted mature human artemin growth
CC factor protein. Artemin is a neurotrophic factor that belongs to the GDNF
CC (glial cell line-derived neurotrophic factor)/neurturin/persephin family
CC of growth factors and promotes differentiation, maintains mature
CC phenotype and provides trophic support, promoting growth and survival of
CC neurons. Artemin promotes the survival of trigeminal ganglion neurons,
CC nodose ganglion neurons, superior cervical ganglion neurons and tyrosine-
CC hydroxylase-expressing dopaminergic ventral midbrain neurons. Artemin is
CC the only member of the GDNF family that binds to GFR-alpha (growth factor
CC receptor-alpha) and activates the GFR-alpha3/RET (Ret protein- tyrosine
CC kinase) receptor complex and additionally, like GDNF and neurturin,
CC artemin also binds to and activates GFRalpha1/RET. Artemin polypeptides
CC and polynucleotides are administered to treat peripheral neuropathy,
CC amylotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease,
CC Huntington's disease, ischemic stroke, acute brain injury, acute spinal
CC cord injury, a nervous system tumour (e.g. blastomas), multiple
CC sclerosis, infection or enteric disease (e.g. idiopathic constipation or
CC constipation associated with Parkinson's disease, spinal cord injury or
CC use of opiate pain killers). They may also be used to treat a patient
CC suffering from small cell lung carcinoma
XX
SQ Sequence 116 AA;

Query Match 100.0%; Score 601; DB 3; Length 116;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116
```

RESULT 11
AAY68712
ID AAY68712 standard; protein; 116 AA.
XX
AC AAY68712;
XX
DT 05-MAY-2000 (first entry)
XX
DE Amino acid sequence of a neublastin neurotrophic factor variant NBN116.
XX
KW Neurotrophic factor; neublastin; neurodegenerative disease;

```
KW   cerebral ischemic neuronal damage; traumatic brain injury;
KW   peripheral neuropathy; Alzheimer's disease; Huntington's disease;
KW   Parkinson's disease; Parkinson-Plus syndrome;
KW   progressive Supranuclear Palsy; Olivopontocerebellar atrophy;
KW   Shy-Drager Syndrome; Guamanian parkinsonism dementia complex;
KW   amyotrophic lateral sclerosis; memory impairment; neuronal disorder;
KW   neuropathy; ischemic stroke; acute brain injury;
KW   acute spinal cord injury; nervous system tumour; multiple sclerosis;
KW   neurotoxin exposure; metabolic disease; diabetes; renal dysfunction;
KW   eye disorder.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   98
FT                   /note= "glycosylated residue"
XX
PN   WO200001815-A2.
XX
PD   13-JAN-2000.
XX
PF   05-JUL-1999;   99WO-DK000384.
XX
PR   06-JUL-1998;   98DK-00000904.
PR   09-JUL-1998;   98US-0092229P.
PR   19-AUG-1998;   98DK-00001048.
PR   25-AUG-1998;   98US-0097774P.
PR   06-OCT-1998;   98DK-00001265.
PR   13-OCT-1998;   98US-0103908P.
PR   02-JUL-1999;   99US-00347613.
XX
PA   (NEUR-) NEUROSEARCH AS.
XX
PI   Johansen TE,  Blom N,  Hansen C;
XX
DR   WPI; 2000-171013/15.
XX
PT   New isolated polypeptides, used for treating e.g. neurodegenerative
PT   disease or disorder, neuronal damage or neuronal disorder of the
PT   peripheral nervous system, the medulla or the spinal cord.
XX
PS   Claim 14; Page 98-99; 106pp; English.
XX
CC   The present sequence represents a variant of a neurotrophic factor
CC   designated neublastin. Neublastin is a member of the glial cell line-
CC   derived neurotrophic factor sub-class of the transforming growth factor-
CC   beta superfamily of neurotrophic factors. Neublastin exhibits high
CC   affinity for the GFR-alpha3-RET receptor complex. The polypeptides can be
CC   used for treating a neurodegenerative disease or disorder, cerebral
CC   ischemic neuronal damage, traumatic brain injury, peripheral neuropathy,
CC   Alzheimer's disease, Huntington's disease, Parkinson's disease, Parkinson
CC   -Plus syndromes, progressive Supranuclear Palsy, Olivopontocerebellar
CC   atrophy, Shy-Drager Syndrome, Guamanian parkinsonism dementia complex,
CC   amyotrophic lateral sclerosis, memory impairment, or a neuronal disorder
CC   of the peripheral nervous system, the medulla or the spinal cord. They
CC   can also be used for treating various neuropathies. They can also be used
CC   for treating ischemic stroke, acute brain injury, acute spinal cord
CC   injury, nervous system tumours, multiple sclerosis, exposure to
CC   neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
CC   and damage caused by infectious agents, or various disorders in the eye
XX
SQ   Sequence 116 AA;

  Query Match             100.0%;  Score 601;  DB 3;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-55;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116


RESULT 12
ABB82397
ID   ABB82397 standard; protein; 116 AA.
XX
AC   ABB82397;
XX
DT   08-JAN-2003  (first entry)
XX
DE   Human mature neublastin (NBN) fragment 116NBN (residues 25-140).
XX
KW   NBN; neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
KW   human.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Modified-site   98
FT                   /note= "glycosylated Asn"
XX
PN   WO200278730-A2.
XX
PD   10-OCT-2002.
XX
PF   28-FEB-2002; 2002WO-US006388.
XX
PR   28-MAR-2001; 2001US-00820421.
PR   28-MAR-2001; 2001US-0287554P.
XX
PA   (BIOJ ) BIOGEN INC.
XX
PI   Sah DWY;
XX
DR   WPI; 2002-740922/80.
XX
PT   Treating neuropathic pain in a subject comprises administering a
PT   formulation comprising a neublastin polypeptide.
XX
PS   Claim 8; Page 62; 69pp; English.
XX
CC   The invention relates to treating neuropathic pain in a subject and
CC   involves administering a formulation comprising a neublastin (NBN)
CC   polypeptide. The method is useful for treating, preventing or delaying
CC   neuropathic pain. The present sequence represents a fragment of the human
CC   neublastin (NBN) mature polypeptide
XX
SQ   Sequence 116 AA;

  Query Match             100.0%;  Score 601;  DB 5;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-55;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116


RESULT 13
ABJ15111
ID   ABJ15111 standard; protein; 116 AA.
XX
AC   ABJ15111;
XX
DT   19-DEC-2002  (first entry)
XX
DE   Pre-pro- neublastin variant SEQ ID No 11.
XX
```

KW Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW neublastin; ischemic neuronal damage; traumatic brain injury; diabetes;
KW peripheral neuropathy; neuropathic pain; Alzheimer's disease; glaucoma;
KW Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW memory impairment; renal disease; variant; mutant; mutein.
XX
OS Homo sapiens.
XX
PN WO200272826-A2.
XX
PD 19-SEP-2002.
XX
PF 12-MAR-2002; 2002WO-EP002691.
XX
PR 12-MAR-2001; 2001US-00804615.
XX
PA (BIOJ) BIOGEN INC.
PA (NSGE-) NS GENE AS.
XX
PI Sah DWY, Johansen TE, Rossomando A;
XX
DR WPI; 2002-713515/77.
XX
PT New truncated neublastin polypeptides lacking one or more amino-terminal
PT amino acids of a mature neublastin polypeptide useful for treating
PT neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT pain, brain injury.
XX
PS Example 5; Page 119-120; 138pp; English.
XX
CC The invention relates to a truncated neublastin polypeptide comprising an
CC amino acid terminus that lacks one or more amino-terminal amino acids of
CC a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC useful for treating neurodegenerative disorders such as ischemic neuronal
CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC diseases, or glaucoma by moderating metabolism, growth, differentiation
CC or survival of a nerve or neuronal cell. This sequence is a pre-pro-
CC neublastin variant protein of the invention
XX
SQ Sequence 116 AA;

Query Match 100.0%; Score 601; DB 5; Length 116;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
Db 4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
Db 64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116

RESULT 14
ADR16441
ID ADR16441 standard; protein; 116 AA.
XX
AC ADR16441;
XX
DT 04-NOV-2004 (first entry)
XX
DE Neublastin 116 (NBN116) amino acid sequence SEQ ID NO:7.
XX
KW polymer-conjugated dimer; neublastin; NBN; mutated neublastin;
KW neuroprotective; nootropic; antiparkinsonian; anticonvulsant; virucide;
KW analgesic; RET receptor activator; neuropathic pain;
KW neurodegenerative disease; Alzheimer's disease; Huntington's disease;
KW Parkinson's disease; Guamanian parkinsonism; dementia complex;
KW tactile allodynia; viral infection; viral associated neuropathy;
KW painful diabetic neuropathy; pain sensitivity reduction; human; NBN116.
XX
OS Homo sapiens.
XX
PN WO2004069176-A2.
XX
PD 19-AUG-2004.
XX
PF 02-FEB-2004; 2004WO-US002763.
XX
PR 31-JAN-2003; 2003US-00356264.
XX
PA (BIOG-) BIOGEN IDEC MA INC.
XX
PI Sah DW, Pepinsky RB, Boriack-Sjodin PA, Miller SS, Rossomando A;
PI Silvian L;
XX
DR WPI; 2004-625384/60.
XX
PT Polymer-conjugated dimer of mutated neublastin polypeptide useful for
PT treating neuropathic pain, comprises first and second polypeptides having
PT specific mutations.
XX
PS Claim 4; SEQ ID NO 7; 74pp; English.
XX
CC The present invention describes a polymer-conjugated dimer (I) of a
CC mutated neublastin (NBN) polypeptide comprising first and second
CC polypeptides comprising the amino acid sequence containing at least 70%
CC sequence identity with amino acids 8-113 of the 113 amino acid sequence
CC of SEQ ID NO:1 (S1, ADR16435), where the first polypeptide comprises one
CC or more amino acid substitution, insertion or fusion as compared to (S1).
CC Also described: (1) a composition (II) comprising a homodimer of NBN106-
CC N95K conjugated to three or four PEG polymer having molecular weight of
CC 10000 Da, or a mixture of two different forms of (I); (2) a nucleic acid
CC (III) encoding the first polypeptide of (I); and (3) a host cell
CC transformed with (III). (I) has neuroprotective, nootropic,
CC antiparkinsonian, anticonvulsant, virucide and analgesic activities, and
CC can be used as an activator of RET receptor. (I) is useful for treating
CC neuropathic pain in a mammal, which involves administering (I) to the
CC mammal. (I) is also useful for activating the RET receptor in a mammal,
CC which involves administering (I) to the mammal. (II) is useful for
CC treating disorders or diseases such as neurodegenerative disease
CC involving lesioned and traumatic neurons, Alzheimer's disease,
CC Huntington's disease, Parkinson's disease, Guamanian parkinsonism,
CC dementia complex, tactile allodynia, viral infections and viral
CC associated neuropathies, painful diabetic neuropathy, and for reducing
CC the loss of pain sensitivity in a subject. The present sequence
CC represents the NBN116 amino acid sequence, which is used in the
CC exemplification of the present invention.
XX
SQ Sequence 116 AA;

Query Match 100.0%; Score 601; DB 8; Length 116;
Best Local Similarity 100.0%; Pred. No. 1.4e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
Db 4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy 61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
Db 64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116

RESULT 15
ABJ15133
ID ABJ15133 standard; protein; 135 AA.
XX
AC ABJ15133;
XX
DT 19-DEC-2002 (first entry)
XX

DE Synthetic HisNeublastin protein.
XX
KW Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW neublastin; ischemic neuronal damage; traumatic brain injury; diabetes;
KW peripheral neuropathy; neuropathic pain; Alzheimer's disease; glaucoma;
KW Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW memory impairment; renal disease.
XX
OS Unidentified.
XX
PN WO200272826-A2.
XX
PD 19-SEP-2002.
XX
PF 12-MAR-2002; 2002WO-EP002691.
XX
PR 12-MAR-2001; 2001US-00804615.
XX
PA (BIOJ) BIOGEN INC.
PA (NSGE-) NS GENE AS.
XX
PI Sah DWY, Johansen TE, Rossomando A;
XX
DR WPI; 2002-713515/77.
XX
PT New truncated neublastin polypeptides lacking one or more amino-terminal
PT amino acids of a mature neublastin polypeptide useful for treating
PT neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT pain, brain injury.
XX
PS Example 12; Page 136-137; 138pp; English.
XX
CC The invention relates to a truncated neublastin polypeptide comprising an
CC amino acid terminus that lacks one or more amino-terminal amino acids of
CC a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC useful for treating neurodegenerative disorders such as ischemic neuronal
CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC diseases, or glaucoma by moderating metabolism, growth, differentiation
CC or survival of a nerve or neuronal cell. This sequence is a neublastin
CC related protein of the invention
XX
SQ Sequence 135 AA;

Query Match 100.0%; Score 601; DB 5; Length 135;
Best Local Similarity 100.0%; Pred. No. 1.7e-55;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         23 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 82

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         83 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 135
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Search completed: March 27, 2005, 15:40:03
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:32:32 ; Search time 15.5098 Seconds
(without alignments)
543.872 Million cell updates/sec

Title: US-09-357-349D-3
Perfect score: 601
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Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
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Post-processing: Minimum Match 0%
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Listing first 45 summaries

Database : Issued_Patents_AA:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	601	100.0	113	3	US-09-220-528-3	Sequence 3, Appli
2	601	100.0	113	4	US-09-347-613C-12	Sequence 12, Appl
3	601	100.0	113	4	US-09-662-183A-12	Sequence 12, Appl
4	601	100.0	116	3	US-09-220-528-4	Sequence 4, Appli
5	601	100.0	116	4	US-09-347-613C-11	Sequence 11, Appl
6	601	100.0	116	4	US-09-662-183A-11	Sequence 11, Appl
7	601	100.0	140	3	US-09-220-528-5	Sequence 5, Appli
8	601	100.0	140	4	US-09-347-613C-10	Sequence 10, Appl
9	601	100.0	140	4	US-09-662-183A-10	Sequence 10, Appl
10	601	100.0	159	3	US-09-220-528-12	Sequence 12, Appl
11	601	100.0	159	3	US-09-220-528-89	Sequence 89, Appl
12	601	100.0	181	3	US-09-220-528-40	Sequence 40, Appl
13	601	100.0	220	3	US-09-220-528-26	Sequence 26, Appl
14	601	100.0	220	4	US-09-347-613C-9	Sequence 9, Appli
15	601	100.0	220	4	US-09-347-613C-35	Sequence 35, Appl
16	601	100.0	220	4	US-09-662-183A-9	Sequence 9, Appli
17	601	100.0	220	4	US-09-662-183A-35	Sequence 35, Appl
18	601	100.0	237	3	US-09-220-528-32	Sequence 32, Appl
19	589	98.0	113	4	US-09-347-613C-7	Sequence 7, Appli
20	589	98.0	113	4	US-09-662-183A-7	Sequence 7, Appli
21	589	98.0	116	4	US-09-347-613C-6	Sequence 6, Appli
22	589	98.0	116	4	US-09-662-183A-6	Sequence 6, Appli
23	589	98.0	140	4	US-09-347-613C-5	Sequence 5, Appli
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39	237	39.4	133	3	US-08-931-858E-132	Sequence 132, App
40	237	39.4	133	4	US-09-220-407-132	Sequence 132, App
41	237	39.4	156	3	US-08-931-858E-217	Sequence 217, App
42	237	39.4	156	4	US-09-347-613C-36	Sequence 36, Appl
43	237	39.4	156	4	US-09-220-407-217	Sequence 217, App
44	237	39.4	156	4	US-09-662-183A-36	Sequence 36, Appl
45	232	38.6	144	3	US-08-775-414-81	Sequence 81, Appl

ALIGNMENTS

RESULT 1
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; Sequence 3, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
; FILE REFERENCE: 6029-7998
; CURRENT APPLICATION NUMBER: US/09/220,528A
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-3

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Best Local Similarity 100.0%; Pred. No. 1.5e-63;
Matches 113; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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RESULT 2
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; Sequence 12, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; APPLICANT: Blom, Nikolaj
; APPLICANT: Hansen, Claus
; TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
; FILE REFERENCE: NeuroSearch 19313-001
; CURRENT APPLICATION NUMBER: US/09/347,613C
; CURRENT FILING DATE: 1999-07-02

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;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
;   LENGTH: 113
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (95)
;   OTHER INFORMATION: glycosylated asparagine
US-09-347-613C-12

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RESULT 3
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; Sequence 12, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
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;   TYPE: PRT
;   ORGANISM: Homo sapiens
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;   NAME/KEY: CARBOHYD
;   LOCATION: (95)
;   OTHER INFORMATION: glycosylated asparagine
US-09-662-183A-12

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; Sequence 4, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
;   LENGTH: 116
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-528-4

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RESULT 5
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; Sequence 11, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
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;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 116
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (98)
;   OTHER INFORMATION: glycosylated asparagine
US-09-347-613C-11

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RESULT 6
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; Sequence 11, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
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; SEQ ID NO 11
;   LENGTH: 116
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;   LOCATION: (98)
;   OTHER INFORMATION: glycosylated asparagine
US-09-662-183A-11

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RESULT 7
US-09-220-528-5
; Sequence 5, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
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;   ORGANISM: Homo sapiens
US-09-220-528-5

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RESULT 8
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; Sequence 10, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
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;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
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RESULT 9
US-09-662-183A-10
; Sequence 10, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
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;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
;   LENGTH: 140
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (122)
;   OTHER INFORMATION: glycosylated asparagine
US-09-662-183A-10

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RESULT 10
US-09-220-528-12
; Sequence 12, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
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US-09-220-528-12

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; Sequence 89, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
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US-09-220-528-89
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RESULT 12
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; Sequence 40, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
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;   ORGANISM: Homo sapiens
US-09-220-528-40

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; Sequence 26, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
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RESULT 14
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; Sequence 9, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
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;  SOFTWARE: PatentIn Ver. 2.1
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US-09-347-613C-9

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RESULT 15
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; Sequence 35, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
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;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
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US-09-347-613C-35

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	601	100.0	113	9	US-09-804-615-12	Sequence 12, Appl
3	601	100.0	113	15	US-10-669-853-13	Sequence 13, Appl
4	601	100.0	113	16	US-10-661-984A-12	Sequence 12, Appl
5	601	100.0	114	9	US-09-804-615-37	Sequence 37, Appl
6	601	100.0	114	16	US-10-661-984A-54	Sequence 54, Appl
7	601	100.0	116	9	US-09-220-920-4	Sequence 4, Appli
8	601	100.0	116	9	US-09-804-615-11	Sequence 11, Appl
9	601	100.0	116	15	US-10-669-853-12	Sequence 12, Appl
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11	601	100.0	135	9	US-09-804-615-40	Sequence 40, Appl
12	601	100.0	135	16	US-10-661-984A-57	Sequence 57, Appl
13	601	100.0	140	9	US-09-220-920-5	Sequence 5, Appli
14	601	100.0	140	9	US-09-804-615-10	Sequence 10, Appl
15	601	100.0	140	15	US-10-669-853-11	Sequence 11, Appl
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19	601	100.0	181	9	US-09-220-920-40	Sequence 40, Appl
20	601	100.0	220	9	US-09-220-920-26	Sequence 26, Appl
21	601	100.0	220	9	US-09-804-615-9	Sequence 9, Appli
22	601	100.0	220	13	US-10-001-054-56	Sequence 56, Appl
23	601	100.0	220	14	US-10-223-085-318	Sequence 318, App
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36	601	100.0	220	15	US-10-295-027-402	Sequence 402, App
37	601	100.0	220	15	US-10-295-027-404	Sequence 404, App
38	601	100.0	220	15	US-10-081-056-318	Sequence 318, App
39	601	100.0	220	15	US-10-669-853-2	Sequence 2, Appli
40	601	100.0	220	16	US-10-661-984A-9	Sequence 9, Appli
41	601	100.0	228	15	US-10-295-027-408	Sequence 408, App
42	601	100.0	237	9	US-09-220-920-32	Sequence 32, Appl
43	601	100.0	237	15	US-10-295-027-406	Sequence 406, App
44	601	100.0	238	9	US-09-813-398-40	Sequence 40, Appl
45	597	99.3	112	15	US-10-669-853-14	Sequence 14, Appl

ALIGNMENTS

RESULT 1
US-09-220-920-3
; Sequence 3, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 3
; LENGTH: 113
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-920-3

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RESULT 2
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; Sequence 12, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
;   LENGTH: 113
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (95)
;   OTHER INFORMATION: glycosylated asparagine
US-09-804-615-12

  Query Match             100.0%;  Score 601;  DB 9;  Length 113;
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; Sequence 13, Application US/10669853
; Publication No. US20040077543A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen, Inc.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  TITLE OF INVENTION: Treatment Using Neublastin Polypeptides
;  FILE REFERENCE: 00689-507 (A118) utility
;  CURRENT APPLICATION NUMBER: US/10/669,853
;  CURRENT FILING DATE:  2003-09-24
;  PRIOR APPLICATION NUMBER: USSN 60/287,554
;  PRIOR FILING DATE: 2001-03-28
;  NUMBER OF SEQ ID NOS: 27
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 13
;   LENGTH: 113
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (95)
;   OTHER INFORMATION: glycosylated asparagine
US-10-669-853-13

  Query Match             100.0%;  Score 601;  DB 15;  Length 113;
  Best Local Similarity   100.0%;  Pred. No. 4.1e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
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Db          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113


RESULT 4
US-10-661-984A-12
; Sequence 12, Application US/10661984A
; Publication No. US20040142418A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen Idec Ma Inc.
;  APPLICANT:  NSGene
;  APPLICANT:  Johansen, Teit E.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  APPLICANT:  Rossomando, Anthony
;  TITLE OF INVENTION: Novel Neurotrophic Factors
;  FILE REFERENCE: C045 US CP2
;  CURRENT APPLICATION NUMBER: US/10/661,984A
;  CURRENT FILING DATE:  2003-09-12
;  PRIOR APPLICATION NUMBER: PCT
;  PRIOR FILING DATE: 2002-02-28
;  PRIOR APPLICATION NUMBER: Danish 1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: 60/092229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: Danish 1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: 60/097774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: 60/103908
;  PRIOR FILING DATE: 1998-10-13
;  NUMBER OF SEQ ID NOS: 57
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 12
;   LENGTH: 113
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (95)...(95)
;   OTHER INFORMATION: glycoslylated asparagine
US-10-661-984A-12

  Query Match             100.0%;  Score 601;  DB 16;  Length 113;
  Best Local Similarity   100.0%;  Pred. No. 4.1e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
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Db          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113


RESULT 5
US-09-804-615-37
; Sequence 37, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
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;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 37
;   LENGTH: 114
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:synthetic
;   OTHER INFORMATION: Neublastin
US-09-804-615-37

  Query Match             100.0%;  Score 601;  DB 9;  Length 114;
  Best Local Similarity   100.0%;  Pred. No. 4.1e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
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Db          2 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 61

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         62 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 114


RESULT 6
US-10-661-984A-54
; Sequence 54, Application US/10661984A
; Publication No. US20040142418A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen Idec Ma Inc.
;  APPLICANT:  NSGene
;  APPLICANT:  Johansen, Teit E.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  APPLICANT:  Rossomando, Anthony
;  TITLE OF INVENTION: Novel Neurotrophic Factors
;  FILE REFERENCE: C045 US CP2
;  CURRENT APPLICATION NUMBER: US/10/661,984A
;  CURRENT FILING DATE:  2003-09-12
;  PRIOR APPLICATION NUMBER: PCT
;  PRIOR FILING DATE: 2002-02-28
;  PRIOR APPLICATION NUMBER: Danish 1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: 60/092229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: Danish 1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: 60/097774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: 60/103908
;  PRIOR FILING DATE: 1998-10-13
;  NUMBER OF SEQ ID NOS: 57
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 54
;   LENGTH: 114
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic gene
;   OTHER INFORMATION: for Neublastin
US-10-661-984A-54

  Query Match             100.0%;  Score 601;  DB 16;  Length 114;
  Best Local Similarity   100.0%;  Pred. No. 4.1e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 61

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         62 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 114


RESULT 7
US-09-220-920-4
; Sequence 4, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
;  FILE REFERENCE: 6029-7996
;  CURRENT APPLICATION NUMBER: US/09/220,920
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
;   LENGTH: 116
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-920-4

  Query Match             100.0%;  Score 601;  DB 9;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
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Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116


RESULT 8
US-09-804-615-11
; Sequence 11, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
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;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 116
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (98)
;   OTHER INFORMATION: glycosylated asparagine
US-09-804-615-11

  Query Match             100.0%;  Score 601;  DB 9;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
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Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116


RESULT 9
US-10-669-853-12
; Sequence 12, Application US/10669853
; Publication No. US20040077543A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen, Inc.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  TITLE OF INVENTION: Treatment Using Neublastin Polypeptides
;  FILE REFERENCE: 00689-507 (A118) utility
;  CURRENT APPLICATION NUMBER: US/10/669,853
;  CURRENT FILING DATE:  2003-09-24
;  PRIOR APPLICATION NUMBER: USSN 60/287,554
;  PRIOR FILING DATE: 2001-03-28
;  NUMBER OF SEQ ID NOS: 27
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 12
;   LENGTH: 116
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (98)
;   OTHER INFORMATION: glycosylated asparagine
US-10-669-853-12

  Query Match             100.0%;  Score 601;  DB 15;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116


RESULT 10
US-10-661-984A-11
; Sequence 11, Application US/10661984A
; Publication No. US20040142418A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen Idec Ma Inc.
;  APPLICANT:  NSGene
;  APPLICANT:  Johansen, Teit E.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  APPLICANT:  Rossomando, Anthony
;  TITLE OF INVENTION: Novel Neurotrophic Factors
;  FILE REFERENCE: C045 US CP2
;  CURRENT APPLICATION NUMBER: US/10/661,984A
;  CURRENT FILING DATE:  2003-09-12
;  PRIOR APPLICATION NUMBER: PCT
;  PRIOR FILING DATE: 2002-02-28
;  PRIOR APPLICATION NUMBER: Danish 1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: 60/092229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: Danish 1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: 60/097774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: 60/103908
;  PRIOR FILING DATE: 1998-10-13
;  NUMBER OF SEQ ID NOS: 57
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 11
;   LENGTH: 116
;   TYPE: PRT
;   ORGANISM: Homo Sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (98)...(98)
;   OTHER INFORMATION: glycosylated asparagine
US-10-661-984A-11

  Query Match             100.0%;  Score 601;  DB 16;  Length 116;
  Best Local Similarity   100.0%;  Pred. No. 4.2e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
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Db          4 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 63

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         64 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 116


RESULT 11
US-09-804-615-40
; Sequence 40, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
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;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 40
;   LENGTH: 135
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence:synthetic
;   OTHER INFORMATION: HisNeublastin
US-09-804-615-40

  Query Match             100.0%;  Score 601;  DB 9;  Length 135;
  Best Local Similarity   100.0%;  Pred. No. 4.8e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
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Db         23 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 82

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         83 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 135


RESULT 12
US-10-661-984A-57
; Sequence 57, Application US/10661984A
; Publication No. US20040142418A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen Idec Ma Inc.
;  APPLICANT:  NSGene
;  APPLICANT:  Johansen, Teit E.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  APPLICANT:  Rossomando, Anthony
;  TITLE OF INVENTION: Novel Neurotrophic Factors
;  FILE REFERENCE: C045 US CP2
;  CURRENT APPLICATION NUMBER: US/10/661,984A
;  CURRENT FILING DATE:  2003-09-12
;  PRIOR APPLICATION NUMBER: PCT
;  PRIOR FILING DATE: 2002-02-28
;  PRIOR APPLICATION NUMBER: Danish 1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: 60/092229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: Danish 1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: 60/097774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: 60/103908
;  PRIOR FILING DATE: 1998-10-13
;  NUMBER OF SEQ ID NOS: 57
;  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 57
;   LENGTH: 135
;   TYPE: PRT
;   ORGANISM: Artificial Sequence
;   FEATURE:
;   OTHER INFORMATION: Description of Artificial Sequence: synthetic
;   OTHER INFORMATION: HisNeublastin
US-10-661-984A-57

  Query Match             100.0%;  Score 601;  DB 16;  Length 135;
  Best Local Similarity   100.0%;  Pred. No. 4.8e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         23 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 82

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         83 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 135


RESULT 13
US-09-220-920-5
; Sequence 5, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
;  FILE REFERENCE: 6029-7996
;  CURRENT APPLICATION NUMBER: US/09/220,920
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 5
;   LENGTH: 140
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-920-5

  Query Match             100.0%;  Score 601;  DB 9;  Length 140;
  Best Local Similarity   100.0%;  Pred. No. 5e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 87

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 140


RESULT 14
US-09-804-615-10
; Sequence 10, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
;   LENGTH: 140
;   TYPE: PRT
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;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (122)
;   OTHER INFORMATION: glycosylated asparagine
US-09-804-615-10

  Query Match             100.0%;  Score 601;  DB 9;  Length 140;
  Best Local Similarity   100.0%;  Pred. No. 5e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 87

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 140


RESULT 15
US-10-669-853-11
; Sequence 11, Application US/10669853
; Publication No. US20040077543A1
; GENERAL INFORMATION:
;  APPLICANT: Biogen, Inc.
;  APPLICANT:  Sah, Dinah Wen-Yee
;  TITLE OF INVENTION: Treatment Using Neublastin Polypeptides
;  FILE REFERENCE: 00689-507 (A118) utility
;  CURRENT APPLICATION NUMBER: US/10/669,853
;  CURRENT FILING DATE:  2003-09-24
;  PRIOR APPLICATION NUMBER: USSN 60/287,554
;  PRIOR FILING DATE: 2001-03-28
;  NUMBER OF SEQ ID NOS: 27
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 11
;   LENGTH: 140
;   TYPE: PRT
;   ORGANISM: Homo sapiens
;   FEATURE:
;   NAME/KEY: CARBOHYD
;   LOCATION: (122)
;   OTHER INFORMATION: glycosylated asparagine
US-10-669-853-11

  Query Match             100.0%;  Score 601;  DB 15;  Length 140;
  Best Local Similarity   100.0%;  Pred. No. 5e-48;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         28 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 87

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         88 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 140


Search completed: March 27, 2005, 16:03:33
Job time : 37.861 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:31:17 ; Search time 11.8841 Seconds
(without alignments)
914.875 Million cell updates/sec

Title: US-09-357-349D-3
Perfect score: 601
Sequence: 1 AGGPGSRARAAGARGCRLRS.....VNSTWRTVDRLSATACGCLG 113

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	232	38.6	197	2	T47159	hypothetical prote
2	174.5	29.0	211	2	I49686	glial cell line-de
3	169.5	28.2	211	2	A37499	glial cell line-de
4	167.5	27.9	211	2	B37499	glial cell line-de
5	108	18.0	560	1	WFHUM	mullerian inhibiti
6	99	16.5	575	2	T11753	mullerian inhibiti
7	97	16.1	575	1	WFBOM	mullerian inhibiti
8	91.5	15.2	553	1	A42499	mullerian inhibiti
9	88.5	14.7	555	1	S20100	mullerian inhibiti
10	87	14.5	350	2	T25451	transforming growt
11	86	14.3	238	2	T37040	hypothetical prote
12	84	14.0	151	2	S43296	bone morphogenetic
13	84	14.0	357	2	A39364	GDF-1 embryonic gr
14	83.5	13.9	309	2	JC5697	placental transfor
15	83.5	13.9	372	2	C39364	GDF-1 embryonic gr
16	82.5	13.7	616	2	JQ1441	hypothetical 67K p
17	81.5	13.6	641	1	QQBE31	nuclear antigen EB
18	79	13.1	366	1	A24248	inhibin alpha chai
19	77.5	12.9	455	2	A43918	TGF-beta-related p
20	77.5	12.9	569	2	T50711	urease (EC 3.5.1.5
21	75	12.5	255	2	S53099	nef protein - huma
22	74.5	12.4	216	2	T30657	hypothetical prote
23	73.5	12.2	407	2	T37242	transforming growt
24	73.5	12.2	409	2	S01825	transforming growt
25	72.5	12.1	304	2	AG3324	UDP-N-acetylmurama
26	72	12.0	255	1	ASLJSZ	nef protein - huma
27	72	12.0	450	2	T01711	probable serine/th
28	72	12.0	1107	1	S52517	myosin I heavy cha
29	71.5	11.9	365	2	T43286	cet-1 protein - Ca
30	71.5	11.9	436	2	B55452	cartilage-derived
31	71	11.8	360	1	A25732	inhibin alpha chai
32	71	11.8	364	1	WFPGA	inhibin alpha chai
33	71	11.8	364	2	F36470	Wnt-6 protein - mo
34	71	11.8	365	2	JC7694	soluble-type glyco
35	71	11.8	846	2	S52418	GTP-binding regula
36	71	11.8	879	2	I64133	phosphoenolpyruvat
37	70.5	11.7	410	2	A41397	transforming growt
38	70.5	11.7	658	2	JC8011	G protein-coupled
39	70.5	11.7	728	2	T20561	hypothetical prote
40	70	11.6	411	1	I55604	platelet glycoprot
41	70	11.6	583	2	T16007	hypothetical prote
42	70	11.6	588	2	A26158	decapentaplegic pr
43	70	11.6	698	2	T17261	hypothetical prote
44	69.5	11.6	203	2	S32799	hypothetical prote
45	69.5	11.6	207	2	S37618	vgr protein - rat

ALIGNMENTS

RESULT 1
T47159
hypothetical protein DKFZp762B0211.1 - human
C;Species: Homo sapiens (man)
C;Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 09-Jul-2004
C;Accession: T47159
R;Blum, H.; Bauersachs, S.; Mewes, H.W.; Weil, B.; Wiemann, S.
submitted to the Protein Sequence Database, March 2000
A;Reference number: Z24379
A;Accession: T47159
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-197 <AAA>
A;Cross-references: UNIPROT:Q99748; EMBL:AL161995
A;Experimental source: adult melanoma (MeWo cell line); clone DKFZp762B0211
C;Genetics:
A;Note: DKFZp762B0211.1

Query Match 38.6%; Score 232; DB 2; Length 197;
Best Local Similarity 45.8%; Pred. No. 1.3e-16;
Matches 55; Conservative 10; Mismatches 41; Indels 14; Gaps 3;

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Qy          4 PGSRARAA----------GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSP 53
              || | ||           ||| | ||   | |  ||||: ||| | ||:|:|:|  |
Db         81 PGPRRRAGPRRRRARARLGARPCGLRELEVRVSELGLGYASDETVLFRYCAGACEAAARV 140

Qy         54 HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 112
              :|| |  |     ||     |  :|||||| ||  |||:| :| : ||  |||  | |:
Db        141 YDLGLRRLRQRRRLR---RERVRAQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECACV 197
```

RESULT 2
I49686
glial cell line-derived neuotrophic factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C;Accession: I49686; JC6518
R;Watabe, K.; Fukuda, T.; Tanaka, J.; Honda, H.; Toyohara, K.; Sakai, O.
J. Neurosci. Res. 41, 279-290, 1995
A;Title: Spontaneously immortalized adult mouse Schwann cells secrete autocrine and parac
A;Reference number: I49686; MUID:95379105; PMID:7650763
A;Accession: I49686
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-211 <RES>
A;Cross-references: UNIPROT:P48540; GB:D49921; NID:g758584; PIDN:BAA08660.1; PID:g758585
R;Matsushita, N.; Fujita, Y.; Tanaka, M.; Nogatsu, T.; Kiuchi, K.
Gene 203, 149-157, 1997
A;Title: Cloning and structural organization of the gene encoding the mouse glial cell li
A;Reference number: JC6518; MUID:98086214; PMID:9426245
A;Accession: JC6518
A;Status: preliminary

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A;Molecule type: nucleic acid
A;Residues: 1-211 <MAT>

  Query Match             29.0%;  Score 174.5;  DB 2;  Length 211;
  Best Local Similarity   36.9%;  Pred. No. 1.2e-10;
  Matches   41;  Conservative   19;  Mismatches   46;  Indels    5;  Gaps    2;

Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLL 62
              | | | :    ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|
Db        105 GKGRRGQRGKNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCESAETMYDKILKNLS 164

Qy         63 GAGALRPPPGSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 112
                :  |     |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        165 RSRRLT----SDKVGQACCRPVAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211


RESULT 3
A37499
glial cell line-derived neurotrophic factor precursor - rat
N;Alternate names: GDNF
N;Contains: glial cell line-derived neurotrophic factor splice form GDNF555; glial cell
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Feb-1994 #sequence_revision 16-Feb-1994 #text_change 09-Jul-2004
C;Accession: A37499; I67605; I53427; I58180; S61537
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic n
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: A37499
A;Molecule type: mRNA; protein
A;Residues: 1-211 <LIN>
A;Cross-references: UNIPROT:Q07731; GB:L15305; NID:g310123; PIDN:AAA67909.1; PID:g310124
A;Experimental source: glial cell line B49
A;Note: sequence extracted from NCBI backbone (NCBIP:132083)
R;Springer, J.E.; Seeburger, J.L.; He, J.; Gabrea, A.; Blankenhorn, E.P.; Bergman, L.W.
Exp. Neurol. 131, 47-52, 1995
A;Title: cDNA sequence and differential mRNA regulation of two forms of glial cell line-
A;Reference number: I53427; MUID:95203379; PMID:7895811
A;Accession: I67605
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-24,'A',52-76,'S',78-89,'K',91-211 <SPR1>
A;Cross-references: GB:S75585; NID:g912790; PIDN:AAB33892.1; PID:g912791
A;Experimental source: Long-Evan rats; splice form GDNF555
A;Accession: I53427
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-76,'S',78-89,'K',91-211 <SPR2>
A;Cross-references: GB:S75583; NID:g912788; PIDN:AAB33891.1; PID:g912789
A;Experimental source: strain uncertain; splice form GDNF633
R;Suter-Crazzolara, C.; Unsicker, K.
Neuroreport 5, 2486-2488, 1994
A;Title: GDNF is expressed in two forms in many tissues outside the CNS.
A;Reference number: I58180; MUID:95210610; PMID:7696586
A;Accession: I58180
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-24,'A',52-76 <SUT>
A;Cross-references: EMBL:X92495; NID:g1045219; PIDN:CAA63237.1; PID:g1045220
A;Experimental source: strain wistar; kidney
C;Genetics:
A;Gene: gdnf
C;Keywords: disulfide bond; glycoprotein; homodimer
F;1-211/Product: glial cell line-derived neurotrophic factor splice form GDNF633 #status
F;1-24,'A',52-211/Product: glial cell line-derived neurotrophic factor splice form GDNF5
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-77/Domain: propeptide #status predicted <PRO>
F;78-211/Product: glial cell line-derived neurotrophic factor #status experimental <MAT>
F;126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             28.2%;  Score 169.5;  DB 2;  Length 211;
  Best Local Similarity   36.0%;  Pred. No. 3.8e-10;
  Matches   40;  Conservative   20;  Mismatches   46;  Indels    5;  Gaps    2;

Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLL 62
              | | | :    ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|
Db        105 GKGRRGQRGKNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCEAAETMYDKILKNLS 164

Qy         63 GAGALRPPPGSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 112
                :  |     |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        165 RSRRLT----SDKVGQACCRPVAFDDDLSFLDDSLVYHILRKHSAKRCGCI 211


RESULT 4
B37499
glial cell line-derived neurotrophic factor precursor - human
N;Alternate names: GDNF
C;Species: Homo sapiens (man)
C;Date: 26-Aug-1999 #sequence_revision 26-Aug-1999 #text_change 09-Jul-2004
C;Accession: B37499
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic ne
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: B37499
A;Molecule type: DNA
A;Residues: 1-211 <LIN>
A;Cross-references: UNIPROT:P39905; GB:L19063; GB:L15306; NID:g306761; PIDN:AAA67910.1; P
A;Note: sequence extracted from NCBI backbone (NCBIP:132084)
C;Keywords: glycoprotein; homodimer
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-77/Domain: propeptide #status predicted <PRO>
F;78-211/Product: glial cell line-derived neurotrophic factor #status predicted <MAT>
F;126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             27.9%;  Score 167.5;  DB 2;  Length 211;
  Best Local Similarity   36.9%;  Pred. No. 6.2e-10;
  Matches   41;  Conservative   18;  Mismatches   47;  Indels    5;  Gaps    2;

Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLL 62
              | | | :    ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|
Db        105 GKGRRGQRGKNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCDAAETTYDKILKNLS 164

Qy         63 GAGALRPPPGSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 112
                :  |     |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        165 RNRRL----VSDKVGQACCRPIAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211


RESULT 5
WFHUM
mullerian inhibiting factor precursor - human
N;Alternate names: anti-Mullerian hormone; mullerian inhibiting substance (MIS)
C;Species: Homo sapiens (man)
C;Date: 13-Aug-1986 #sequence_revision 13-Aug-1986 #text_change 09-Jul-2004
C;Accession: A01397
R;Cate, R.L.; Mattaliano, R.J.; Hession, C.; Tizard, R.; Farber, N.M.; Cheung, A.; Ninfa,
an, K.L.; Ragin, R.C.; Manganaro, T.F.; MacLaughlin, D.T.; Donahoe, P.K.
Cell 45, 685-698, 1986
A;Title: Isolation of the bovine and human genes for Muellerian inhibiting substance and
A;Reference number: A90879; MUID:86218082; PMID:3754790
A;Accession: A01397
A;Molecule type: DNA
A;Residues: 1-560 <CAT>
A;Cross-references: UNIPROT:P03971; GB:K03474; NID:g188560; PIDN:AAA98805.1; PID:g386953
C;Comment: Although it does not compete with EGF for receptor binding sites, MIS can inhi
C;Comment: For anti-Mullerian hormone type II receptor, see PIR:JC4335.
C;Genetics:
A;Gene: GDB:AMH
A;Cross-references: GDB:118996; OMIM:261550; OMIM:600957
A;Map position: 19p13.3-19p13.3
A;Introns: 138/1; 185/3; 222/1; 275/2
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; hormone; testis
F;1-21/Domain: signal sequence #status predicted <SIG>
F;22-25/Domain: propeptide #status predicted <PRO>
F;26-560/Product: mullerian inhibiting factor #status predicted <MAT>
```

```
F;64,329/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;462-526,488-557,492-559/Disulfide bonds: #status predicted
F;525/Disulfide bonds: interchain #status predicted

  Query Match             18.0%;  Score 108;  DB 1;  Length 560;
  Best Local Similarity   31.0%;  Pred. No. 0.0021;
  Matches   39;  Conservative   11;  Mismatches   48;  Indels   28;  Gaps    7;

Qy          3 GPGSRARAAGARG----CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RRARS 52
              |||   |:|||       | ||   | :||      ||     |  :   | | |   :  |:
Db        445 GPGRAQRSAGATAADGPCALRELSVDLRA----ERSVLIPETYQANNCQGVCGWPQSDRN 500

Qy         53 P----HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVDRLS 105
              |    | : |  :   ||    |       ||| || |     :|  :   :   |  :
Db        501 PRYGNHVVLLLKMQARGAALARP-------PCCVPTAYAGKLLISLSEERISAHHVPNMV 553

Qy        106 ATACGC 111
              || |||
Db        554 ATECGC 559


RESULT 6
T11753
mullerian inhibiting factor precursor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 09-Jul-2004
C;Accession: T11753
R;Daneau, I.; Silversides, D.W.
submitted to the EMBL Data Library, July 1998
A;Reference number: Z17334
A;Accession: T11753
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-575 <DAN>
A;Cross-references: UNIPROT:P79295; EMBL:U80853; NID:g3299818; PID:g3299819
C;Genetics:
A;Gene: MIS
C;Function:
A;Description: causes regression of the Mullerian duct, inhibits the growth of tumors de
ibition
A;Note: produced by the Sertoli cells of the testis
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis

  Query Match             16.5%;  Score 99;  DB 2;  Length 575;
  Best Local Similarity   29.4%;  Pred. No. 0.018;
  Matches   37;  Conservative   12;  Mismatches   49;  Indels   28;  Gaps    7;

Qy          3 GPGSRARAAGAR----GCRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RRARS 52
              ||    |:||       | ||   | :||      ||     |  :   | |:|   :  |:
Db        460 GPARAQRSAGTAVSNGPCALRELSVDLRA----ERSVLIPETYQANNCQGTCGWPQSDRN 515

Qy         53 P----HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVDRLS 105
              |    | : |  :   ||    |       ||| || |     :|  :   :   |  :
Db        516 PRYGNHVVLLLKMQARGAALARP-------PCCVPTAYAGKLLISLSEERISAHHVPNMV 568

Qy        106 ATACGC 111
              || |||
Db        569 ATECGC 574


RESULT 7
WFBOM
mullerian inhibiting factor precursor - bovine
N;Alternate names: Mullerian inhibiting substance (MIS)
C;Species: Bos primigenius taurus (cattle)
C;Date: 13-Aug-1986 #sequence_revision 13-Aug-1986 #text_change 09-Jul-2004
C;Accession: A01398; B01398
R;Cate, R.L.; Mattaliano, R.J.; Hession, C.; Tizard, R.; Farber, N.M.; Cheung, A.; Ninfa
an, K.L.; Ragin, R.C.; Manganaro, T.F.; MacLaughlin, D.T.; Donahoe, P.K.
Cell 45, 685-698, 1986
A;Title: Isolation of the bovine and human genes for Muellerian inhibiting substance and
A;Reference number: A90879; MUID:86218082; PMID:3754790
A;Accession: A01398
A;Molecule type: DNA
A;Residues: 1-14 <CA1>
A;Cross-references: UNIPROT:P03972
A;Experimental source: newborn calf testis, clones cbmis15 and pS21
A;Accession: B01398
A;Molecule type: mRNA
A;Residues: 15-575 <CA2>
C;Comment: This glycoprotein, produced by the Sertoli cells of the testis, causes regres
 tissues of Mullerian duct origin. Other roles for this protein in gonadal differentiatic
ter duct regression and in the adult ovary.
C;Comment: This protein is homologous to the beta transforming growth factor, inhibin alp
these sequences. All of these proteins are biologically active as disulfide-linked dimer
C;Comment: Although it does not compete with EGF for receptor binding sites, MIS can inhi
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-24/Domain: propeptide #status predicted <PRO>
F;25-575/Product: mullerian inhibiting factor #status predicted <MAT>
F;78,344/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             16.1%;  Score 97;  DB 1;  Length 575;
  Best Local Similarity   29.4%;  Pred. No. 0.029;
  Matches   37;  Conservative   12;  Mismatches   49;  Indels   28;  Gaps    7;

Qy          3 GPGSRARAAGARG----CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RRARS 52
              |     |:|||       | ||   | :||      ||     |  :   | |:|   :  |:
Db        460 GSARAQRSAGAAAADGPCALRELSVDLRA----ERSVLIPETYQANNCQGACGWPQSDRN 515

Qy         53 P----HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVDRLS 105
              |    | : |  :   ||    |       ||| || |     :|  :   :   |  :
Db        516 PRYGNHVVLLLKMQARGATLARP-------PCCVPTAYTGKLLISLSEERISAHHVPNMV 568

Qy        106 ATACGC 111
              || |||
Db        569 ATECGC 574


RESULT 8
A42499
mullerian inhibiting factor precursor - rat
N;Alternate names: anti-mullerian hormone; mullerian inhibiting substance (MIS)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: A42499
R;Haqq, C.; Lee, M.M.; Tizard, R.; Wysk, M.; DeMarinis, J.; Donahoe, P.K.; Cate, R.L.
Genomics 12, 665-669, 1992
A;Title: Isolation of the rat gene for Mullerian inhibiting substance.
A;Reference number: A42499; MUID:92241861; PMID:1572639
A;Accession: A42499
A;Molecule type: DNA
A;Residues: 1-553 <HAQ>
A;Cross-references: UNIPROT:P49000; GB:S98336; NID:g248896; PIDN:AAB22104.1; PID:g248897
A;Note: sequence extracted from NCBI backbone (NCBIN:98336, NCBIP:98343)
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis

  Query Match             15.2%;  Score 91.5;  DB 1;  Length 553;
  Best Local Similarity   28.5%;  Pred. No. 0.1;
  Matches   35;  Conservative   14;  Mismatches   49;  Indels   25;  Gaps    7;

Qy          3 GPGSRARAAGARG-CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RRARSP-- 53
              |   |:: . |  | | ||   | :||      ||     |  :   | |:|   :  |:|
Db        441 GRAGRSKGTGTDGLCALRELSVDLRA----ERSVLIPETYQANNCQGACAWPQSDRNPRY 496

Qy         54 --HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVDRLSATA 108
                | : |  :   ||          |||  || |     :|  : : :   |  : ||
Db        497 GNHVVLLLKMQARGAALG-------RLPCCVPTAYTGKLLISLSEEHISAHHVPNMVATE 549

Qy        109 CGC 111
              |||
Db        550 CGC 552
```

```
RESULT 9
S20100
mullerian inhibiting factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: S20100; S51159
R;Muensterberg, A.; Lovell-Badge, R.
Development 113, 613-624, 1991
A;Title: Expression of the mouse anti-Muellerian hormone gene suggests a role in both ma
A;Reference number: S20100; MUID:92146272; PMID:1782869
A;Accession: S20100
A;Molecule type: DNA
A;Residues: 1-555 <MUE>
A;Cross-references: UNIPROT:P27106; EMBL:X63240; NID:g49945; PIDN:CAA44912.1; PID:g49946
R;Dresser, D.W.; Hacker, A.; Lovell-Badge, R.; Guerrier, D.
submitted to the EMBL Data Library, January 1995
A;Description: The genes for anti-Muellerian hormone (AMH) and a spliceosome protein (SA
A;Reference number: S51159
A;Accession: S51159
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-41 <DRE>
A;Cross-references: EMBL:X83733
C;Genetics:
A;Introns: 135/1; 182/3; 219/1; 272/2
C;Superfamily: inhibin

  Query Match             14.7%;  Score 88.5;  DB 1;  Length 555;
  Best Local Similarity   28.7%;  Pred. No. 0.21;
  Matches   37;  Conservative   10;  Mismatches   51;  Indels   31;  Gaps    7;

Qy          3 GPGSRARAAGARG-------CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSCR---R 49
              |   | |    ||        | ||   | :||     ||    |  :   | |:||
Db        437 GREGRGRTRAQRGDKGQDGPCALRELSVDLRA----ERSVLIPETYQANNCQGACRWPQS 492

Qy         50 ARSP----HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVD 102
                |:|    | : |  :   ||            ||| || |     :|  :   :   |
Db        493 DRNPRYGNHVVLLLKMQARGAALG-------RLPCCVPTAYAGKLLISLSEERISADHVP 545

Qy        103 RLSATACGC 111
                : || |||
Db        546 NMVATECGC 554


RESULT 10
T25451
transforming growth factor beta homolog - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 09-Jul-2004
C;Accession: T25451
R;Bentley, D.
submitted to the EMBL Data Library, December 1996
A;Description: The sequence of C. elegans cosmid B0412.
A;Reference number: Z20037
A;Accession: T25451
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-350 <BEN>
A;Cross-references: UNIPROT:P92172; EMBL:U80953; PIDN:AAB52554.1; GSPDB:GN00021
A;Experimental source: strain Bristol N2; clone B0412
C;Genetics:
A;Gene: daf-7
A;Map position: 3
A;Introns: 43/3; 123/3; 184/2; 288/3
C;Superfamily: inhibin

  Query Match             14.5%;  Score 87;  DB 2;  Length 350;
  Best Local Similarity   26.9%;  Pred. No. 0.19;
  Matches   35;  Conservative   16;  Mismatches   47;  Indels   32;  Gaps    8;

Qy          5 GSRAR----------AAGARGCRLRSQLVPVRALGLGHRSDELV---RFR--FCSGSCRR 49
              ||| |           | ::|| |    :    :|     | :|   |:    | | |

Db        229 GSRKRRSHAKPVCNAEAQSKGCCLYDLEIEFEKIGW----DWIVAPPRYNAYMCRGDCH- 283

Qy         50 ARSPHDLSLASLLGAGALRPPPGSRPVSQP----CCRPTRYEAVSFMDVNSTWR----TV 101
                : |  :||    :  :|    :  || |    || || |: :  : ||   |     |
Db        284 -YNAHHFNLAETGHSKIMR---AAHKVSNPEIGYCCHPTEYDYIKLIYVNRDGRVSIANV 339

Qy        102 DRLSATACGC 111
                : : |  |||
Db        340 NGMIAKKCGC 349


RESULT 11
T37040
hypothetical protein SCJ12.23 - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: T37040
R;Murphy, L.; Harris, D.; Thomson, N.R.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
submitted to the EMBL Data Library, August 1999
A;Reference number: Z21619
A;Accession: T37040
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-238 <MUR>
A;Cross-references: UNIPROT:Q9RI37; EMBL:AL109989; PIDN:CAB53435.1; GSPDB:GN00070; SCOEDE
A;Experimental source: strain A3(2)
C;Genetics:
A;Gene: SCOEDB:SCJ12.23

  Query Match             14.3%;  Score 86;  DB 2;  Length 238;
  Best Local Similarity   35.1%;  Pred. No. 0.17;
  Matches   39;  Conservative    8;  Mismatches   48;  Indels   16;  Gaps    6;

Qy          9 RAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRR--ARSPHDLSLASLLGAGA 66
              | | ||| |     :||     | | |  ||    :|| |   ||  ||| :  |  |||
Db          2 RGARARGQRAGGHRLPVG----GRRPDHRVRRPGGAGSARDGIARDVHDLVIQRLF-AGA 56

Qy         67 LRPPPG-SRPVSQPCCRPTRYEAVSFMD-----VNST---WRTVDRLSATA 108
              | | |   |  :|         |: :|     : ||    |  || : ||
Db         57 LSPQPALGRVTGRPKASERIQRVVADLDDTIKVIRSTIHALRESDRQTGTA 107


RESULT 12
S43296
bone morphogenetic protein-related protein (GDF7) - mouse
C;Species: Mus musculus (house mouse)
C;Date: 20-Oct-1994 #sequence_revision 10-Nov-1995 #text_change 09-Jul-2004
C;Accession: S43296
R;Storm, E.E.; Huynh, T.V.; Copeland, N.G.; Jenkins, N.A.; Kingsley, D.M.; Lee, S.J.
Nature 368, 639-643, 1994
A;Title: Limb alterations in brachypodism mice due to mutations in a new member of the TG
A;Reference number: S43294; MUID:94195427; PMID:8145850
A;Accession: S43296
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-151 <STO>
A;Cross-references: UNIPROT:P43029; GB:U08339; NID:g488465; PIDN:AAA18780.1; PID:g488466
C;Superfamily: inhibin

  Query Match             14.0%;  Score 84;  DB 2;  Length 151;
  Best Local Similarity   26.8%;  Pred. No. 0.18;
  Matches   34;  Conservative   16;  Mismatches   51;  Indels   26;  Gaps    8;

Qy          2 GGPGSRARAAGARG---CRLRSQLVPVRALGLGHRSDELV-----RFRFCSGSC----RR 49
              || |    |  | ||    |  :|  |  : ||     | ::         | | |    |
Db         33 GGGGGAGRGHGRRGRSRCSRKSLHVDFKELGW---DDWIIAPLDYEAYHCEGVCDFPLRS 89

Qy         50 ARSP-HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDV----NSTWRTVDRL 104
                  | :   : :|| : |    | : | |  || | |   :| : :    |  ::  : :
Db         90 HLEPTNHAIIQTLLNSMA----PDAAPAS--CCVPARLSPISILYIDAANNVVYKQYEDM 143

Qy        105 SATACGC 111
                ||||
```

```
Db        144 VVEACGC 150


RESULT 13
A39364
GDF-1 embryonic growth factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 06-Mar-1992 #sequence_revision 06-Mar-1992 #text_change 09-Jul-2004
C;Accession: A39364; A35683
R;Lee, S.J.
Proc. Natl. Acad. Sci. U.S.A. 88, 4250-4254, 1991
A;Title: Expression of growth/differentiation factor 1 in the nervous system: conservati
A;Reference number: A39364; MUID:91239545; PMID:2034669
A;Accession: A39364
A;Molecule type: mRNA
A;Residues: 1-357 <LEE>
A;Cross-references: UNIPROT:P20863; GB:M62301; NID:g193458; PIDN:AAA37676.1; PID:g193460
R;Lee, S.J.
Mol. Endocrinol. 4, 1034-1040, 1990
A;Title: Identification of a novel member (GDF-1) of the transforming growth factor-beta
A;Reference number: A35683; MUID:91133438; PMID:1704486
A;Accession: A35683
A;Molecule type: mRNA
A;Residues: 1-144,'C',146-357 <LE2>
A;Cross-references: GB:M57639; NID:g193456; PIDN:AAA37674.1; PID:g193457
C;Superfamily: inhibin

  Query Match             14.0%;  Score 84;  DB 2;  Length 357;
  Best Local Similarity   31.2%;  Pred. No. 0.4;
  Matches   35;  Conservative   10;  Mismatches   45;  Indels   22;  Gaps    8;

Qy         16 CRLRSQLVPVRALGLGHR---SDELVRFRFCSGSC------RRARSPHDLS---LASLLG 63
              || |   |  | :|  ||   :       || |:|      |    |  |:   | :|:
Db        251 CRTRRLHVSFREVG-WHRWVIAPRGFLANFCQGTCALPETLRGPGGPPALNHAVLRALMH 309

Qy         64 AGALRPPPGSRPVSQPCCRPTRYEAVS--FMD--VNSTWRTVDRLSATACGC 111
              | |  | ||:     ||| | |   :|  | |   |   |  : :    |||
Db        310 AAA--PTPGA---GSPCCVPERLSPISVLFFDNSDNVVLRHYEDMVVDECGC 356


RESULT 14
JC5697
placental transforming growth factor-beta homolog - human
C;Species: Homo sapiens (man)
C;Date: 20-Nov-1997 #sequence_revision 20-Nov-1997 #text_change 09-Jul-2004
C;Accession: JC5697
R;Yokoyama-Kobayashi, M.; Saeki, M.; Sekine, S.; Kato, S.
J. Biochem. 122, 622-626, 1997
A;Title: Human cDNA encoding a novel TGF-beta superfamily protein highly expressed in pl
A;Reference number: JC5697; MUID:98006316; PMID:9348093
A;Accession: JC5697
A;Molecule type: mRNA
A;Residues: 1-309 <YOK>
A;Cross-references: UNIPROT:Q9BWA0; DDBJ:AB000584
A;Experimental source: fibrosarcoma
C;Comment: This protein plays a role in reproduction.

  Query Match             13.9%;  Score 83.5;  DB 2;  Length 309;
  Best Local Similarity   28.8%;  Pred. No. 0.4;
  Matches   34;  Conservative   11;  Mismatches   50;  Indels   23;  Gaps    6;

Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGH--RSDELVRFRFCSGSCR---RARSPHDLS 57
              |||        | ||| :    :  ||       |   |:   | |:|    || : |
Db        207 GPG--------RCCRLHTVRASLEDLGWADWVLSPREVQVTMCIGACPSQFRAANMHAQI 258

Qy         58 LASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM---DVNSTWRTVDRLSATACGCL 112
                ||     |:|      |  ||| |  |  :  :   |   : :| | | |  | |:
Db        259 KTSL---HRLKPD----TVPAPCCVPASYNPMVLIQKTDTGVSLQTYDDLLAKDCHCI 309


RESULT 15
C39364
GDF-1 embryonic growth factor - human
C;Species: Homo sapiens (man)
C;Date: 06-Mar-1992 #sequence_revision 06-Mar-1992 #text_change 09-Jul-2004
C;Accession: C39364
R;Lee, S.J.
Proc. Natl. Acad. Sci. U.S.A. 88, 4250-4254, 1991
A;Title: Expression of growth/differentiation factor 1 in the nervous system: conservatic
A;Reference number: A39364; MUID:91239545; PMID:2034669
A;Accession: C39364
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-372 <LEE>
A;Cross-references: UNIPROT:P27539; GB:M62302; NID:g183050; PID:g183052
C;Superfamily: inhibin

  Query Match             13.9%;  Score 83.5;  DB 2;  Length 372;
  Best Local Similarity   26.5%;  Pred. No. 0.47;
  Matches   35;  Conservative   10;  Mismatches   44;  Indels   43;  Gaps    9;

Qy          2 GGPGSRARAAGARGCRLRSQLVPVRALGLGHR---SDELVRFRFCSGSCRRARSPHDLSL 58
              ||||           || |   |  | :|  ||   :       :| | |
Db        261 GGPGG--------ACRARRLYVSFREVG-WHRWVIAPRGFLANYCQGQCALP-------- 303

Qy         59 ASLLGAGALRPP--------------PGSRPVSQPCCRPTRYEAVS--FMD--VNSTWR 99
                :| |:|   ||              ||:  :  ||| | |   :|  | |   |   |
Db        304 VALSGSGG--PPALNHAVLRALMHAAAPGAADL--PCCVPARLSPISVLFFDNSDNVVLR 359

Qy        100 TVDRLSATACGC 111
                : :    |||
Db        360 QYEDMVVDECGC 371


Search completed: March 27, 2005, 15:45:03
Job time : 12.2175 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:18:47 ; Search time 44.1123 Seconds
(without alignments)
1311.764 Million cell updates/sec

Title: US-09-357-349D-3
Perfect score: 601
Sequence: 1 AGGPGSRARAAGARGCRLRS.....VNSTWRTVDRLSATACGCLG 113

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	601	100.0	220	2	O96030	O96030 homo sapien
2	601	100.0	228	2	Q6P6A3	Q6p6a3 homo sapien
3	601	100.0	237	2	O95441	O95441 homo sapien
4	533	88.7	224	2	Q6AYE8	Q6aye8 rattus norv
5	528	87.9	224	2	Q9Z0L2	Q9z0l2 m neurotrop
6	372	61.9	125	2	Q9QZG3	Q9qzg3 rattus norv
7	237	39.4	156	1	PSPN_HUMAN	O60542 homo sapien
8	232	38.6	197	1	NRTN_HUMAN	Q99748 homo sapien
9	228.5	38.0	156	1	PSPN_MOUSE	O70300 mus musculu
10	225	37.4	195	1	NRTN_MOUSE	P97463 mus musculu
11	222	36.9	195	2	Q811Q5	Q811q5 rattus norv
12	221.5	36.9	156	1	PSPN_RAT	O70301 rattus norv
13	221	36.8	41	2	Q810F6	Q810f6 rattus norv
14	190	31.6	157	2	Q810F7	Q810f7 rattus norv
15	174.5	29.0	211	1	GDNF_MOUSE	P48540 mus musculu
16	174.5	29.0	240	2	Q6LEL9	Q6lel9 mus musculu
17	173.5	28.9	143	2	Q8MJ77	Q8mj77 ailuropoda
18	173.5	28.9	160	2	O97685	O97685 macaca mula
19	171	28.5	161	2	Q9QZG0	Q9qzg0 rattus norv
20	169.5	28.2	211	1	GDNF_RAT	Q07731 rattus norv
21	167.5	27.9	133	2	Q9UD32	Q9ud32 homo sapien
22	167.5	27.9	211	1	GDNF_HUMAN	P39905 homo sapien
23	157.5	26.2	134	2	Q804C2	Q804c2 nipponia ni
24	157.5	26.2	143	2	Q8QGE9	Q8qge9 nipponia ni
25	152.5	25.4	182	2	Q9IAM2	Q9iam2 gallus gall
26	152.5	25.4	215	2	Q9IAM3	Q9iam3 gallus gall
27	152.5	25.4	235	2	Q98TU0	Q98tu0 brachydanio
28	148.5	24.7	121	2	Q6TYB7	Q6tyb7 bos taurus
29	145.5	24.2	199	2	Q8R485	Q8r485 rattus norv
30	124	20.6	93	2	Q6DTU4	Q6dtu4 cyprinus ca
31	108	18.0	560	1	MIS_HUMAN	P03971 homo sapien
32	99.5	16.6	36	2	Q9JMC0	Q9jmc0 rattus norv
33	99	16.5	575	1	MIS_PIG	P79295 sus scrofa
34	98	16.3	364	2	Q9PVK1	Q9pvk1 gallus gall
35	97	16.1	575	1	MIS_BOVIN	P03972 bos taurus
36	93	15.5	634	2	Q6V9R8	Q6v9r8 macropus eu
37	91.5	15.2	553	1	MIS_RAT	P49000 rattus norv
38	88.5	14.7	303	1	GDFF_RAT	Q9z0j6 rattus norv
39	88.5	14.7	555	1	MIS_MOUSE	P27106 mus musculu
40	88	14.6	154	2	Q6X2S5	Q6x2s5 felis silve
41	87	14.5	350	1	DAF7_CAEEL	P92172 caenorhabdi
42	86	14.3	238	2	Q9RI37	Q9ri37 streptomyce
43	86	14.3	281	2	Q6AVP7	Q6avp7 oryza sativ
44	86	14.3	485	2	Q6JVF1	Q6jvf1 trichinella
45	85	14.1	512	2	Q9LH25	Q9lh25 oryza sativ

ALIGNMENTS

RESULT 1
O96030
ID O96030 PRELIMINARY; PRT; 220 AA.
AC O96030;
DT 01-MAY-1999 (TrEMBLrel. 10, Created)
DT 01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE Neurotrophic factor artemin (Pre-pro-neublastin) (Pre-pro-enovin
DE precursor).
GN Name=EVN; Synonyms=ARTN;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA Milbrandt J.;
RT "Artemin, a novel member of the GDNF ligand family, supports
RT peripheral and central neurons and signals through the GFRalpha3-RET
RT receptor complex.";
RL Neuron 21:1291-1302(1998).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=20139608; PubMed=10673327; DOI=10.1006/mcne.1999.0817;
RA Rosenblad C., Gronborg M., Hansen C., Blom N., Meyer M., Johansen J.,
RA Dago L., Kirik D., Patel U.A., Lundberg C., Trono D., Bjorklund A.,
RA Johansen T.E.;
RT "In vivo protection of nigral dopamine neurons by lentiviral gene
RT transfer of the novel GDNF-family member neublastin/artemin.";
RL Mol. Cell. Neurosci. 15:199-214(2000).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=20050601; PubMed=10583383;
RA Masure S., Geerts H., Cik M., Hoefnagel E., Van Den Kieboom G.,
RA Tuytelaars A., Harris S., Lesage A.S., Leysen J.E., van der Helm L.,
RA Verhasselt P., Yon J., Gordon R.D.;
RT "Enovin, a member of the glial cell-line-derived neurotrophic factor
RT (GDNF) family with growth promoting activity on neuronal cells.
RT Existence and tissue-specific expression of different splice
RT variants.";
RL Eur. J. Biochem. 266:892-902(1999).
RN [4]
RP SEQUENCE FROM N.A.
RA Masure S.L.;
RL Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
CC -!- SIMILARITY: Belongs to the TGF-beta family.
DR EMBL; AF115765; AAD13109.1; -.
DR EMBL; AF120274; AAD21075.1; -.
DR EMBL; AJ245628; CAB52396.1; -.
DR EMBL; AF109401; AAC98690.1; -.

```
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0007405; P:neuroblast proliferation; TAS.
DR   GO; GO:0007165; P:signal transduction; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor; Signal.
FT   SIGNAL       1     39       Potential.
FT   CHAIN      108    220       Enovin.
SQ   SEQUENCE   220 AA;  22906 MW;  C47754B19AADCFBB CRC64;

  Query Match             100.0%;  Score 601;  DB 2;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 3.7e-53;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        108 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 167

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        168 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 2
Q6P6A3
ID   Q6P6A3      PRELIMINARY;      PRT;   228 AA.
AC   Q6P6A3;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Neurotrophic factor artemin, isoform 3,.
GN   Name=ARTN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RA   Strausberg R.;
RL   Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; BC062375; AAH62375.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   228 AA;  23616 MW;  568BFD09EE05D0FC CRC64;

  Query Match             100.0%;  Score 601;  DB 2;  Length 228;
  Best Local Similarity   100.0%;  Pred. No. 3.8e-53;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        116 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 175

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        176 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228


RESULT 3
O95441
ID   O95441      PRELIMINARY;      PRT;   237 AA.
AC   O95441;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF115765; AAD13110.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:727; ARTN.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   237 AA;  24471 MW;  11C64C4B510CE3AB CRC64;

  Query Match             100.0%;  Score 601;  DB 2;  Length 237;
  Best Local Similarity   100.0%;  Pred. No. 4e-53;
  Matches  113;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        125 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 184

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        185 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 237


RESULT 4
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Q6AYE8
ID   Q6AYE8      PRELIMINARY;      PRT;   224 AA.
AC   Q6AYE8;
DT   25-OCT-2004 (TrEMBLrel. 28, Created)
DT   25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Hypothetical protein.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RX   PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Director MGC Project;
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; BC079078; AAH79078.1; -.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor; Hypothetical protein.
SQ   SEQUENCE   224 AA;  23656 MW;  08907D743F651495 CRC64;

  Query Match             88.7%;  Score 533;  DB 2;  Length 224;
  Best Local Similarity   89.4%;  Pred. No. 3.2e-46;
  Matches  101;  Conservative    2;  Mismatches   10;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||   |||||  |||||||||||||| |||||| |||||:|||||||||||||||||||||
Db        112 AGTRSSRARATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSPHDLSLAS 171

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              || ||||| |||||||:||||||||||||||||||||||||| ||||||||||
Db        172 LLDAGALRSPPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 5
Q9Z0L2
ID   Q9Z0L2      PRELIMINARY;      PRT;   224 AA.
AC   Q9Z0L2;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Neurotrophic factor artemin (Mus musculus adult male testis cDNA,
DE   RIKEN full-length enriched library, clone:4930445K15 product:artemin,
DE   full insert sequence) (Mus musculus 2 days pregnant adult female
DE   oviduct cDNA, RIKEN full-length enriched library, clone:E230001A22
DE   product:artemin, full insert sequence).
GN   Name=Artn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
RA   Carninci P., Hayashizaki Y.;
RT   "High-efficiency full-length cDNA cloning.";
RL   Meth. Enzymol. 303:19-44(1999).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
RA   RIKEN FANTOM Consortium;
RT   "Functional annotation of a full-length mouse cDNA collection.";
RL   Nature 409:685-690(2001).
RN   [4]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RA   The FANTOM Consortium,
RA   the RIKEN Genome Exploration Research Group Phase I & II Team;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
RN   [5]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
RA   Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
RA   Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
RT   "Normalization and subtraction of cap-trapper-selected cDNAs to
RT   prepare full-length cDNA libraries for rapid discovery of new genes.";
RL   Genome Res. 10:1617-1630(2000).
RN   [6]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
RA   Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
RA   Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
RA   Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
RA   Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
RA   Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
RA   Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
RA   Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RT   "RIKEN integrated sequence analysis (RISA) system-384-format
RT   sequencing pipeline with 384 multicapillary sequencer.";
RL   Genome Res. 10:1757-1771(2000).
RN   [7]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Testis;
RA   Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
RA   Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA   Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
RA   Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
RA   Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
RA   Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
RA   Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
RA   Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
RA   Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA   Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
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RA   Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
RN   [8]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct;
RA   Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
RA   Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
RA   Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
RA   Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
RA   Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
RA   Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
RA   Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
RA   Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
RA   Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
RA   Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
RA   Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF109402; AAC98691.1; -.
DR   EMBL; AK015393; BAB29827.1; -.
DR   EMBL; AK053914; BAC35590.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:1333791; Artn.
DR   GO; GO:0005615; C:extracellular space; IDA.
DR   GO; GO:0005515; F:protein binding; IPI.
DR   GO; GO:0005102; F:receptor binding; IPI.
DR   GO; GO:0007411; P:axon guidance; IDA.
DR   GO; GO:0050930; P:induction of positive chemotaxis; IDA.
DR   GO; GO:0007422; P:peripheral nervous system development; IMP.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
FT   CHAIN       112    224       neurotrophic factor artemin.
SQ   SEQUENCE   224 AA;  23726 MW;  3328FB794581DF0B CRC64;

  Query Match             87.9%;  Score 528;  DB 2;  Length 224;
  Best Local Similarity   88.5%;  Pred. No. 1e-45;
  Matches  100;  Conservative    2;  Mismatches   11;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||   ||||   |||||||||||||| |||||| ||||:||||||||||||||| |||||||
Db        112 AGTRSSRARTTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLAS 171

Qy         61 LLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||||||| |||||||:|||||||||||||||||||||||||||| ||||||||||
Db        172 LLGAGALRSPPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 6
Q9QZG3
ID   Q9QZG3      PRELIMINARY;      PRT;   125 AA.
AC   Q9QZG3;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=ARTN;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Cochlea;
RX   MEDLINE=20185640; PubMed=10719212; DOI=10.1016/S0169-328X(99)00328-9;
RA   Stover T., Gong T.L., Cho Y., Altschuler R.A., Lomax M.I.;
RT   "Expression of the GDNF family members and their receptors in the
RT   mature rat cochlea.";
RL   Brain Res. Mol. Brain Res. 76:25-35(2000).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF184919; AAF01241.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor.
FT   NON_TER       1      1
FT   NON_TER     125    125
SQ   SEQUENCE   125 AA;  12983 MW;  8EDE626E44B83231 CRC64;

  Query Match             61.9%;  Score 372;  DB 2;  Length 125;
  Best Local Similarity   87.7%;  Pred. No. 4.3e-30;
  Matches   71;  Conservative    2;  Mismatches    8;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLAS 60
              ||   ||||| |||||||||||||| |||||| ||||:|||||||||||||||||||||||
Db         45 AGTRSSRARATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSPHDLSLAS 104

Qy         61 LLGAGALRPPPGSRPVSQPCC 81
              |||||||| |||||||:|||||
Db        105 LLGAGALRSPPGSRPISQPCC 125


RESULT 7
PSPN_HUMAN
ID   PSPN_HUMAN     STANDARD;      PRT;   156 AA.
AC   O60542;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=PSPN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
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CC   ---------------------------------------------------------------------
DR   EMBL; AF040962; AAC39640.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:9579; PSPN.
DR   MIM; 602921; -.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0007417; P:central nervous system development; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
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DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  16600 MW;  6547751653A7044A CRC64;

  Query Match           39.4%;  Score 237;  DB 1;  Length 156;
  Best Local Similarity   45.5%;  Pred. No. 3e-16;
  Matches   55;  Conservative   15;  Mismatches   35;  Indels   16;  Gaps    3;

Qy          1 AGG-------PGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARS 52
              |||       | :| | | :  |:| |  : |  ||||: |:| | ||:|:||| | ||:
Db         44 AGGTWLGTHRPLARLRRALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPRGART 103

Qy         53 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 112
                | |:|| | | |        |    |||||||  |:|:|    |: : :||| ||||
Db        104 QHGLALARLQGQG--------RAHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAACGCG 155

Qy        113 G 113
              |
Db        156 G 156


RESULT 8
NRTN_HUMAN
ID   NRTN_HUMAN     STANDARD;      PRT;   197 AA.
AC   Q99748;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Neurturin precursor.
GN   Name=NRTN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=97100947; PubMed=8945474; DOI=10.1038/384467a0;
RA   Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
RA   Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
RT   "Neurturin, a relative of glial-cell-line-derived neurotrophic
RT   factor.";
RL   Nature 384:467-470(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Melanoma;
RA   Blum H., Bauersachs S., Mewes H.-W., Weil B., Wiemann S.;
RL   Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   VARIANT HSCR SER-96.
RC   TISSUE=Peripheral blood lymphocytes;
RX   MEDLINE=98367034; PubMed=9700200; DOI=10.1093/hmg/7.9.1449;
RA   Doray B., Salomon R., Amiel J., Pelet A., Touraine R., Billaud M.,
RA   Attie T., Bachy B., Munnich A., Lyonnet S.;
RT   "Mutation of the RET ligand, neurturin, supports multigenic
RT   inheritance in Hirschsprung disease.";
RL   Hum. Mol. Genet. 7:1449-1452(1998).
CC   -!- FUNCTION: Supports the survival of sympathetic neurons in culture.
CC       May regulate the development and maintenance of the CNS. Might
CC       control the size of non-neuronal cell population such as
CC       haemopoietic cells.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- DISEASE: Defects in NRTN are a cause of Hirschsprung disease
CC       (HSCR) [MIM:142623]. In association with mutations of RET gene,
CC       and possibly with other loci, defects in NRTN are involved in
CC       Hirschsprung's disease. This genetic disorder of neural crest
CC       development is characterized by the absence of intramural ganglion
CC       cells in the hindgut, often resulting in intestinal obstruction.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U78110; AAC50898.1; -.
DR   EMBL; AL161995; CAB82327.1; -.
DR   PIR; T47159; T47159.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:8007; NRTN.
DR   H-InvDB; HIX0014687; -.
DR   MIM; 602018; -.
DR   MIM; 142623; -.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0000165; P:MAPKKK cascade; TAS.
DR   GO; GO:0007399; P:neurogenesis; TAS.
DR   GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Disease mutation; Growth factor; Hirschsprung disease; Polymorphism;
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   PROPEP       20     95       By similarity.
FT   CHAIN        96    197       Neurturin.
FT   DISULFID    103    165       By similarity.
FT   DISULFID    130    194       By similarity.
FT   DISULFID    134    196       By similarity.
FT   DISULFID    164    164       Interchain (By similarity).
FT   VARIANT      96     96       A -> S (in HSCR; associated to a RET
FT                                mutation; incomplete penetrance;
FT                                dbSNP:1801281).
FT                                /FTId=VAR_009498.
SQ   SEQUENCE   197 AA;  22405 MW;  91AFAC8C3F8971FD CRC64;

  Query Match           38.6%;  Score 232;  DB 1;  Length 197;
  Best Local Similarity   45.8%;  Pred. No. 1.2e-15;
  Matches   55;  Conservative   10;  Mismatches   41;  Indels   14;  Gaps    3;

Qy          4 PGSRARAA----------GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSP 53
              || | ||           ||| | ||   | |  ||||: ||| | ||:|:|:|  |
Db         81 PGPRRRAGPRRRRARARLGARPCGLRELEVRVSELGLGYASDETVLFRYCAGACEAAARV 140

Qy         54 HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 112
              :|| |  |      ||      |  :||||||| ||  |||:| :| : ||  |||  | |:
Db        141 YDLGLRRLRQRRRLR---RERVRAQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECACV 197


RESULT 9
PSPN_MOUSE
ID   PSPN_MOUSE     STANDARD;      PRT;   156 AA.
AC   O70300;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=Pspn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
```

```
RC   STRAIN=129/SvJ;
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040960; AAC40057.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:1201684; Pspn.
DR   GO; GO:0005615; C:extracellular space; IDA.
DR   GO; GO:0001658; P:ureteric bud branching; IDA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL       1     21       Potential.
FT   CHAIN       22    156       Persephin.
FT   DISULFID    66    124       By similarity.
FT   DISULFID    93    152       By similarity.
FT   DISULFID    97    154       By similarity.
FT   DISULFID   123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  17030 MW;  7DC6DD98132E041B CRC64;

  Query Match             38.0%;  Score 228.5;  DB 1;  Length 156;
  Best Local Similarity   46.3%;  Pred. No. 2.2e-15;
  Matches   50;  Conservative   14;  Mismatches   35;  Indels    9;  Gaps    2;

Qy          7 RARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARSPHDLSLASLLGAG 65
              |   | |  ||| |  :||  ||||: |:| | ||:|:||| : ||: | | || | | |
Db         57 RLPRALAGSCRLWSLTLPVAELGLGYASEEKVIFRYCAGSCPQEARTQHSLVLARLRGRG 116

Qy         66 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
                    |   :|||:|| |  |:|:|    |: : :||| |||| |
Db        117 --------RAHGRPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCGG 156


RESULT 10
NRTN_MOUSE
ID   NRTN_MOUSE     STANDARD;      PRT;   195 AA.
AC   P97463;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Neurturin precursor.
GN   Name=Nrtn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A., AND SEQUENCE OF 96-110; 127-135; 155-177 AND
RP   181-190.
RX   MEDLINE=97100947; PubMed=8945474; DOI=10.1038/384467a0;
RA   Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
RA   Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
RT   "Neurturin, a relative of glial-cell-line-derived neurotrophic
RT   factor.";
RL   Nature 384:467-470(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=FVB/N; TISSUE=Mammary gland;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC   -!- FUNCTION: Supports the survival of sympathetic neurons in culture.
CC       May regulate the development and maintenance of the CNS. Might
CC       control the size of non-neuronal cell population such as
CC       haemopoietic cells.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Widespread distribution.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U78109; AAC52954.1; -.
DR   EMBL; BC057993; AAH57993.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:108417; Nrtn.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Direct protein sequencing; Growth factor; Signal.
FT   SIGNAL       1     19       Potential.
FT   PROPEP      20     95       By similarity.
FT   CHAIN       96    195       Neurturin.
FT   DISULFID   101    163       By similarity.
FT   DISULFID   128    192       By similarity.
FT   DISULFID   132    194       By similarity.
FT   DISULFID   162    162       Interchain (By similarity).
SQ   SEQUENCE   195 AA;  22219 MW;  ABE21BB35D417448 CRC64;

  Query Match             37.4%;  Score 225;  DB 1;  Length 195;
  Best Local Similarity   45.9%;  Pred. No. 6.4e-15;
  Matches   51;  Conservative   12;  Mismatches   44;  Indels    4;  Gaps    2;
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Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLL 62
              ||  |    ||| | ||   | |  |||| ||| | ||:|:|:|  |   :|| |  |
Db         88 GPRRRRARPGARPCGLRELEVRVSELGLGYTSDETVLFRYCAGACEAAIRIYDLGLRRLR 147

Qy         63 GAGALRPPPGSRPVSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 112
                :|     |  : |||||| ||  |||:||:| : |:  |||  | |:
Db        148 QRRRVR---RERARAHPCCRPTAYEDEVSFLDVHSRYHTLQELSARECACV 195


RESULT 11
Q811Q5
ID   Q811Q5      PRELIMINARY;      PRT;   195 AA.
AC   Q811Q5;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Neurturin.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Substantia nigra;
RX   PubMed=14757528; DOI=10.1016/j.devbrainres.2003.11.006;
RA   Cho J., Kholodilov N.G., Burke R.E.;
RT   "Patterns of developmental mRNA expression of neurturin and GFRalpha2
RT   in the rat striatum and substantia nigra do not suggest a role in the
RT   regulation of natural cell death in dopamine neurons.";
RL   Brain Res. Dev. Brain Res. 148:143-149(2004).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Substantia nigra;
RA   Cho J.W., Kholodilov N.G., Burke R.E.;
RL   Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY190603; AAO27768.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   195 AA;  22184 MW;  55789405F290AD68 CRC64;

  Query Match             36.9%;  Score 222;  DB 2;  Length 195;
  Best Local Similarity   45.0%;  Pred. No. 1.3e-14;
  Matches   50;  Conservative   13;  Mismatches   44;  Indels    4;  Gaps    2;

Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLL 62
              ||  |    |:| | ||   | |  |||| ||| | ||:|:|:|  |   :|| |  |
Db         88 GPRRRRARPGSRPCGLRELEVRVSELGLGYTSDETVLFRYCAGACEAAIRIYDLGLRRLR 147

Qy         63 GAGALRPPPGSRPVSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 112
                :|     |  : |||||| ||  |||:||:| : |:  |||  | |:
Db        148 QRRRVRK---ERVRAHPCCRPTAYEDEVSFLDVHSRYHTLQELSARECACV 195


RESULT 12
PSPN_RAT
ID   PSPN_RAT       STANDARD;      PRT;   156 AA.
AC   O70301;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=Pspn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
RN   [2]
RP   SEQUENCE OF 1-78 FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Pons;
RX   MEDLINE=98374044; PubMed=9710270;
RX   DOI=10.1002/(SICI)1097-4547(19980815)53:4<494::AID-JNR12>3.0.CO;2-2;
RA   Jaszai J., Farkas L.M., Galter D., Reuss B., Strelau J., Unsicker K.,
RA   Krieglstein K.;
RT   "GDNF-related factor persephin is widely distributed throughout the
RT   nervous system.";
RL   J. Neurosci. Res. 53:494-501(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040961; AAC40058.1; -.
DR   EMBL; AJ005169; CAA06410.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   RGD; 3432; Pspn.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  17063 MW;  9631941CC69B00B0 CRC64;

  Query Match             36.9%;  Score 221.5;  DB 1;  Length 156;
  Best Local Similarity   45.5%;  Pred. No. 1.1e-14;
  Matches   45;  Conservative   16;  Mismatches   29;  Indels    9;  Gaps    2;

Qy         16 CRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARSPHDLSLASLLGAGALRPPPGSR 74
              ||| |  :||  |||| |:| : ||:|:||| :  |: | | || | | |       |
Db         66 CRLWSLTLPVAELGLGYASEEKIIFRYCAGSCPQEVRTQHSLVLARLRGQG--------R 117

Qy         75 PVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
                 :|||:|| |  |:|:| :  |: : :||| |||| |
Db        118 AHGRPCCQPTSYADVTFLDDHHHWQQLPQLSAAACGCGG 156


RESULT 13
Q810F6
ID   Q810F6      PRELIMINARY;      PRT;    41 AA.
```

```
AC   Q810F6;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=Artn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Liver;
RA   Carmillo P., McAuliffe M., Tizard R., Cate R.L.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY230413; AAO73544.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor.
FT   NON_TER       1      1
SQ   SEQUENCE   41 AA;  4517 MW;  1ED39984A7D03EDB CRC64;

  Query Match             36.8%;  Score 221;  DB 2;  Length 41;
  Best Local Similarity   95.1%;  Pred. No. 3.1e-15;
  Matches   39;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy         73 SRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 113
              |||:||||||||||||||||||||||||| ||||||||||
Db          1 SRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 41


RESULT 14
Q810F7
ID   Q810F7      PRELIMINARY;      PRT;   157 AA.
AC   Q810F7;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=Artn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Liver;
RA   Carmillo P., McAuliffe M., Tizard R., Cate R.L.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY230412; AAO73543.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
KW   Growth factor.
FT   NON_TER     157    157
SQ   SEQUENCE   157 AA;  16458 MW;  47A72BA029677870 CRC64;

  Query Match             31.6%;  Score 190;  DB 2;  Length 157;
  Best Local Similarity   82.6%;  Pred. No. 1.9e-11;
  Matches   38;  Conservative    1;  Mismatches    7;  Indels    0;  Gaps    0;

Qy          1 AGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGS 46
              ||   |||||  |||||||||||||| |||||| ||||:||||||||
Db        112 AGTRSSRARATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGS 157


RESULT 15
GDNF_MOUSE
ID   GDNF_MOUSE     STANDARD;      PRT;   211 AA.
AC   P48540; O09058; P70446; P97919; P97920;
DT   01-FEB-1996 (Rel. 33, Created)
DT   01-FEB-1996 (Rel. 33, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Glial cell line-derived neurotrophic factor precursor.
GN   Name=Gdnf;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A. (ISOFORM 1).
RC   STRAIN=ICR; TISSUE=Dorsal root ganglion;
RX   MEDLINE=95379105; PubMed=7650763;
RA   Watabe K., Fukuda T., Tanaka J., Honda H., Toyohara K., Sakai O.;
RT   "Spontaneously immortalized adult mouse Schwann cells secrete
RT   autocrine and paracrine growth-promoting activities.";
RL   J. Neurosci. Res. 41:279-290(1995).
RN   [2]
RP   SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC   STRAIN=C57BL/10J; TISSUE=Brain;
RA   Wang F., Too H.P.;
RL   Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   SEQUENCE FROM N.A. (ISOFORM 1).
RC   STRAIN=129/SvJ;
RX   MEDLINE=96404131; PubMed=8808409;
RA   Hellmich H.L., Kos L., Cho E.S., Mahon K.A., Zimmer A.;
RT   "Embryonic expression of glial cell-line derived neurotrophic factor
RT   (GDNF) suggests multiple developmental roles in neural differentiation
RT   and epithelial-mesenchymal interactions.";
RL   Mech. Dev. 54:95-105(1996).
RN   [4]
RP   SEQUENCE FROM N.A. (ISOFORM 1), AND INDUCTION.
RC   TISSUE=Neonatal brain;
RX   PubMed=9426245;
RA   Matsushita N., Fujita Y., Tanaka M., Nagatsu T., Kiuchi K.;
RT   "Cloning and structural organization of the gene encoding the mouse
RT   glial cell line-derived neurotrophic factor, GDNF.";
RL   Gene 203:149-157(1997).
CC   -!- FUNCTION: Neurotrophic factor that enhances survival and
CC       morphological differentiation of dopaminergic neurons and
CC       increases their high-affinity dopamine uptake.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=1;
CC         IsoId=P48540-1; Sequence=Displayed;
CC       Name=2;
CC         IsoId=P48540-2; Sequence=VSP_006421;
CC   -!- INDUCTION: Expression in C6 glioma cells was transiently induced
CC       by treatment with phorbol myristate acetate (PMA), but not by
CC       forskolin.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D49921; BAA08660.1; -.
DR   EMBL; U37459; AAB18672.1; ALT_INIT.
DR   EMBL; U66195; AAB07463.1; ALT_INIT.
DR   EMBL; U75532; AAB18343.1; ALT_INIT.
DR   EMBL; U36449; AAB52953.1; -.
DR   EMBL; D88264; BAA13566.1; ALT_INIT.
DR   EMBL; D88352; BAB12221.1; -.
DR   EMBL; D88351; BAB12221.1; JOINED.
DR   PIR; I49686; I49686.
```

```
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:107430; Gdnf.
DR   GO; GO:0007422; P:peripheral nervous system development; IMP.
DR   GO; GO:0030432; P:peristalsis; IMP.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Alternative splicing; Glycoprotein; Growth factor; Signal.
FT   SIGNAL        1     19       Potential.
FT   PROPEP       20     77       By similarity.
FT   CHAIN        78    211       Glial cell line-derived neurotrophic
FT                                 factor.
FT   DISULFID    118    179       By similarity.
FT   DISULFID    145    208       By similarity.
FT   DISULFID    149    210       By similarity.
FT   DISULFID    178    178       Interchain (By similarity).
FT   CARBOHYD    126    126       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD    162    162       N-linked (GlcNAc. . .) (Potential).
FT   VARSPLIC     25     51       GKRLLEAPAEDHSLGHRRVPFALTSDS -> A (in
FT                                 isoform 2).
FT                                 /FTId=VSP_006421.
SQ   SEQUENCE   211 AA;  23662 MW;  B6731C767A3A95B7 CRC64;

  Query Match             29.0%;  Score 174.5;  DB 1;  Length 211;
  Best Local Similarity   36.9%;  Pred. No. 9.6e-10;
  Matches   41;  Conservative   19;  Mismatches   46;  Indels    5;  Gaps    2;

Qy          3 GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLL 62
              | | | :    ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|
Db        105 GKGRRGQRGKNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCESAETMYDKILKNLS 164

Qy         63 GAGALRPPPGSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 112
                :  |     |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        165 RSRRLT----SDKVGQACCRPVAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211


Search completed: March 27, 2005, 15:43:53
Job time : 45.1123 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:17:42 ; Search time 101.604 Seconds
(without alignments)
867.890 Million cell updates/sec

Title: US-09-357-349D-9
Perfect score: 1222
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 228

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1222	100.0	228	3	AAY44775	Aay44775 Long spli
2	1222	100.0	228	3	AAY93559	Aay93559 A human G
3	1222	100.0	228	6	ABU56705	Abu56705 Lung canc
4	1222	100.0	228	6	ABU56542	Abu56542 Lung canc
5	1222	100.0	228	7	ADN39090	Adn39090 Cancer/an
6	1170	95.7	220	3	AAY84583	Aay84583 Amino aci
7	1170	95.7	220	3	AAY44776	Aay44776 Short spl
8	1170	95.7	220	3	AAY68710	Aay68710 A human p
9	1170	95.7	220	4	AAB50978	Aab50978 Human PRO
10	1170	95.7	220	5	AAU86158	Aau86158 Human PRO
11	1170	95.7	220	5	ABB84975	Abb84975 Human PRO
12	1170	95.7	220	5	ABG30698	Abg30698 Human art
13	1170	95.7	220	5	ABB82388	Abb82388 Human neu
14	1170	95.7	220	5	ABB95581	Abb95581 Human ang
15	1170	95.7	220	5	AAO22940	Aao22940 Human foe
16	1170	95.7	220	6	ABU56702	Abu56702 Lung canc
17	1170	95.7	220	6	ABU56539	Abu56539 Lung canc
18	1170	95.7	220	6	ABU56703	Abu56703 Lung canc
19	1170	95.7	220	6	ABU56540	Abu56540 Lung canc
20	1170	95.7	220	6	ABU71444	Abu71444 Human neo
21	1170	95.7	220	7	ADD10607	Add10607 Human sec
22	1170	95.7	220	7	ADD11567	Add11567 Human sec
23	1170	95.7	220	7	ADD37360	Add37360 Human sec
24	1170	95.7	220	7	ADJ37343	Adj37343 Human tum
25	1170	95.7	220	7	ADN39086	Adn39086 Cancer/an
26	1170	95.7	220	7	ADN39084	Adn39084 Cancer/an
27	1170	95.7	220	8	ADE41568	Ade41568 Human sec
28	1170	95.7	220	8	ADG68267	Adg68267 Human PRO
29	1170	95.7	220	8	ADH43751	Adh43751 Human PRO
30	1170	95.7	220	8	ADK83096	Adk83096 Human PRO
31	1170	95.7	220	8	ADR16439	Adr16439 Human pre
32	1110	90.8	237	3	AAY84585	Aay84585 Alternati
33	1110	90.8	237	3	AAY92037	Aay92037 Human art
34	1110	90.8	237	5	ABG30699	Abg30699 Human art
35	1110	90.8	237	6	ABU56704	Abu56704 Lung canc
36	1110	90.8	237	6	ABU56541	Abu56541 Lung canc
37	1110	90.8	237	7	ADN39088	Adn39088 Cancer/an
38	1097	89.8	237	3	AAY68706	Aay68706 A human n
39	1097	89.8	237	5	AAO22936	Aao22936 Human pre
40	878	71.8	224	5	ABB82390	Abb82390 Rat neubl
41	878	71.8	224	5	AAG79609	Aag79609 Rat varia
42	878	71.8	224	5	ABJ15114	Abj15114 Rat pre-p
43	878	71.8	224	8	ADR16458	Adr16458 Rat neubl
44	868.5	71.1	200	3	AAY68705	Aay68705 Amino aci
45	868.5	71.1	200	5	AAO22935	Aao22935 Human neu

ALIGNMENTS

RESULT 1
AAY44775
ID AAY44775 standard; protein; 228 AA.
XX
AC AAY44775;
XX
DT 17-MAY-2000 (first entry)
XX
DE Long splice variant of human Enovin.
XX
KW Enovin; EVN; neurotrophic growth factor; chromosome 1p31.3-32;
KW glial cell-line derived neurotrophic factor; GDNF; neuroprotective;
KW GDNF family receptor alpha-3; GFR alpha 3; nootropic; analgesic;
KW antirheumatic; cerebroprotective; antiparkinsonian; antiinflammatory;
KW antidiarrhoeal; laxative; antiemetic; neurological disorder; Parkinson's;
KW Alzheimer's; Huntington's; neuropathy; multiple sclerosis; stroke; pain;
KW endocrine neoplasia; prion; rheumatic; inflammation; gastrointestinal;
KW dyspepsia; constipation; intestinal atony; emesis; diarrhoea;
KW Crohn's disease; bowel hypersensitivity; gene therapy; splice variant.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .47
FT /label= Signal_Peptide
FT Peptide 48. .115
FT /label= Pro_sequence
FT Misc-difference 89. .228
FT /note= "This region has been claimed specifically"
FT Protein 116. .228
FT /label= Mature_Enovin
FT /note= "Homologous to GDNF, Neurturin and Persephin"
FT Misc-difference 131
FT /note= "Conserved residue characteristic of Transforming
FT Growth Factor-beta (TGF-beta) family"
FT Misc-difference 158
FT /note= "Conserved residue characteristic of Transforming
FT Growth Factor-beta (TGF-beta) family"
FT Misc-difference 162
FT /note= "Conserved residue characteristic of Transforming
FT Growth Factor-beta (TGF-beta) family"
FT Misc-difference 195
FT /note= "Conserved residue characteristic of Transforming
FT Growth Factor-beta (TGF-beta) family"
FT Misc-difference 196
FT /note= "Conserved residue characteristic of Transforming
FT Growth Factor-beta (TGF-beta) family"
FT Modified-site 210. .212

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FT                   /note= "Asn is N-glycosylated"
FT   Misc-difference 224
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 226
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
XX
PN   WO200004050-A2.
XX
PD   27-JAN-2000.
XX
PF   14-JUL-1999;   99WO-EP005031.
XX
PR   14-JUL-1998;   98GB-00015283.
PR   12-FEB-1999;   99US-00248772.
PR   08-JUN-1999;   99US-00327668.
XX
PA   (JANC ) JANSSEN PHARM NV.
XX
PI   Geerts HA,  Masure SLJ,  Meert TF,  Cik M,  Ver Donck LAL;
XX
DR   WPI; 2000-182404/16.
DR   N-PSDB; AAZ50091.
XX
PT   Novel human neurotrophic growth factor designated enovin used to treat
PT   neurological disorders, neuronal disorders, peripheral neuropathy, brain
PT   injury, nervous system disorders, prion associated and gastrointestinal
PT   diseases.
XX
PS   Claim 11; Fig 23; 125pp; English.
XX
CC   The present sequence is a long splice variant of human Enovin (EVN). EVN
CC   is a neurotrophic growth factor, that belongs to glial cell-line derived
CC   neurotrophic factor (GDNF) family. It binds to GDNF family receptor alpha
CC   -3 (GFR alpha 3). Enovin gene is located on chromosome 1p31.3-32. It is
CC   predominantly expressed in heart, skeletal muscle, pancreas and prostate.
CC   It has nootropic, analgesic, neuroprotective, antirheumatic,
CC   cerebroprotective, antiparkinsonian, antiinflammatory, antidiarrhoeal,
CC   laxative and antiemetic activity. It can be used to treat neurological
CC   disorders like Parkinson's, Alzheimer's and Huntington's disease,
CC   neuropathy, multiple sclerosis, endocrine neoplasia, prion associated
CC   diseases, stroke, pain, rheumatic/inflammatory diseases and
CC   gastrointestinal disorders like dyspepsia, constipation, intestinal
CC   atony, emesis, diarrhoea, Crohn's disease and bowel hypersensitivity. EVN
CC   polynucleotide can be used in gene therapy
XX
SQ   Sequence 228 AA;

  Query Match             100.0%;  Score 1222;  DB 3;  Length 228;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-79;
  Matches  228;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228


RESULT 2
AAY93559
ID   AAY93559 standard; protein; 228 AA.
XX
AC   AAY93559;
XX
DT   25-SEP-2000  (first entry)
XX
DE   A human GDNF-related neurotropic factor 4 (GRNF4).
XX
KW   GDNF; glial cell line-derived neurotropic factor; GFRalpha-3;
KW   GDNF-related neurotropic factor 4; GRNF4; GDNF family receptor-alpha-3;
KW   Parkinson's disease; Alzheimer's disease; amyotrophic lateral sclerosis;
KW   incontinence; bone loss; osteoporosis; osteogenesis imperfecta;
KW   hypercalcemia; nerve damage; stroke; cancer; dideoycytidine; AIDS;
KW   chronic metabolic disease; renal dysfunction.
XX
OS   Homo sapiens.
XX
PN   WO200034475-A2.
XX
PD   15-JUN-2000.
XX
PF   08-DEC-1999;   99WO-US028975.
XX
PR   09-DEC-1998;   98US-0111626P.
XX
PA   (AMGE-) AMGEN INC.
XX
PI   Simonet WS,  Asuncion FJ,  Min H,  Jing S;
XX
DR   WPI; 2000-423421/36.
DR   N-PSDB; AAA46615.
XX
PT   New glial cell line-derived neurotropic factor-related neurotropic factor
PT   4 useful for treating neurodegenerative disease such as Parkinson's
PT   disease and for treating nerve damage caused by physical injury and other
PT   metabolic diseases.
XX
PS   Claim 1; Fig 7; 135pp; English.
XX
CC   The present sequence represents a human GDNF (glial cell line-derived
CC   neurotropic factor)-related neurotropic factor 4 (GRNF4) protein. The
CC   GRNF4 polypeptide is capable of binding a GDNF family receptor-alpha-3
CC   (GFRalpha-3). The GRNF4 polynucleotides may be used for in vitro GRNF4
CC   protein production as well as in cell therapy or gene therapy
CC   applications. GRNF4 protein product may be used in treating, Parkinson's
CC   disease, Alzheimer's disease, amyotrophic lateral sclerosis,
CC   incontinence, diseases associated with bone loss (e.g. osteoporosis,
CC   osteogenesis imperfecta or hypercalcemia of malignancy). GRNF4 protein
CC   products may also be used in the treatment of nerve damage which may
CC   occur to one or more types of nerve cells by physical injury, which
CC   causes the degeneration of the axonal processes and/or nerve cell bodies
CC   near the site of injury, temporary or permanent cessation of blood flow
CC   to parts of the nervous system, as in stroke, intentional or accidental
CC   exposure to neurotoxins, for e.g. chemotherapeutic agents for the
CC   treatment of cancer or dideoycytidine for the treatment of AIDS, chronic
CC   metabolic diseases, including diabetes or renal dysfunction
XX
SQ   Sequence 228 AA;

  Query Match             100.0%;  Score 1222;  DB 3;  Length 228;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-79;
  Matches  228;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
```

```
Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
```

```
RESULT 3
ABU56705
ID   ABU56705 standard; protein; 228 AA.
XX
AC   ABU56705;
XX
DT   02-APR-2003  (first entry)
XX
DE   Lung cancer-associated polypeptide #298.
XX
KW   Lung cancer-associated polypeptide; cytostatic; emphysema;
KW   antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
KW   small cell lung cancer; benign lesion; precancerous lesion; bronchitis;
KW   chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
KW   interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
XX
OS   Unidentified.
XX
PN   WO200286443-A2.
XX
PD   31-OCT-2002.
XX
PF   18-APR-2002; 2002WO-US012476.
XX
PR   18-APR-2001; 2001US-0284770P.
PR   10-MAY-2001; 2001US-0290492P.
PR   09-NOV-2001; 2001US-0339245P.
PR   13-NOV-2001; 2001US-0350666P.
PR   29-NOV-2001; 2001US-0334370P.
PR   12-APR-2002; 2002US-0372246P.
XX
PA   (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI   Aziz N,  Murray R;
XX
DR   WPI; 2003-093161/08.
DR   N-PSDB; ABX76434.
XX
PT   Detecting a lung cancer-associated transcript in a cell from a patient
PT   for treating lung cancer, by contacting a biological sample from the
PT   patient with a polynucleotide that exhibits increased or decreased
PT   expression in lung cancer.
XX
PS   Claim 27; Page 421; 453pp; English.
XX
CC   The invention relates to a method for detecting a lung cancer-associated
CC   transcript in a cell from a patient, comprising contacting a biological
CC   sample from the patient with a polynucleotide that selectively hybridises
CC   to a sequence that is at least 80 % identical to a gene that exhibits
CC   increased or decreased expression in lung cancer samples. Lung cancer-
CC   associated polynucleotides and polypeptides are used for identifying a
CC   compound that modulates a lung cancer-associated polypeptide, for
CC   inhibiting proliferation of a lung cancer-associated cell to treat lung
CC   cancer in a patient and for treating a mammal having lung cancer by
CC   administering a modulatory compound identified. The methods are useful
CC   for treating lung cancer, such as small cell lung cancer, non-small cell
CC   lung cancer or other benign or precancerous lesions, e.g. atelectasis,
CC   emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,
CC   hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and
CC   bronchiectasis. The genes, polynucleotides and polypeptides are useful
CC   for diagnostic purposes and as targets for screening for therapeutic
CC   compounds that modulate lung cancer, such as antibodies. Sequences
CC   ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
CC   invention
XX
SQ   Sequence 228 AA;
```

```
  Query Match           100.0%;  Score 1222;  DB 6;  Length 228;
  Best Local Similarity  100.0%;  Pred. No. 1.3e-79;
  Matches  228;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
```

```
RESULT 4
ABU56542
ID   ABU56542 standard; protein; 228 AA.
XX
AC   ABU56542;
XX
DT   02-APR-2003  (first entry)
XX
DE   Lung cancer-associated polypeptide #135.
XX
KW   Lung cancer-associated polypeptide; cytostatic; emphysema;
KW   antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
KW   small cell lung cancer; benign lesion; precancerous lesion; bronchitis;
KW   chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
KW   interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
XX
OS   Unidentified.
XX
PN   WO200286443-A2.
XX
PD   31-OCT-2002.
XX
PF   18-APR-2002; 2002WO-US012476.
XX
PR   18-APR-2001; 2001US-0284770P.
PR   10-MAY-2001; 2001US-0290492P.
PR   09-NOV-2001; 2001US-0339245P.
PR   13-NOV-2001; 2001US-0350666P.
PR   29-NOV-2001; 2001US-0334370P.
PR   12-APR-2002; 2002US-0372246P.
XX
PA   (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI   Aziz N,  Murray R;
XX
DR   WPI; 2003-093161/08.
DR   N-PSDB; ABX76269.
XX
PT   Detecting a lung cancer-associated transcript in a cell from a patient
PT   for treating lung cancer, by contacting a biological sample from the
PT   patient with a polynucleotide that exhibits increased or decreased
PT   expression in lung cancer.
XX
PS   Claim 27; Page 292; 453pp; English.
XX
CC   The invention relates to a method for detecting a lung cancer-associated
CC   transcript in a cell from a patient, comprising contacting a biological
CC   sample from the patient with a polynucleotide that selectively hybridises
CC   to a sequence that is at least 80 % identical to a gene that exhibits
CC   increased or decreased expression in lung cancer samples. Lung cancer-
CC   associated polynucleotides and polypeptides are used for identifying a
CC   compound that modulates a lung cancer-associated polypeptide, for
```

```
CC   inhibiting proliferation of a lung cancer-associated cell to treat lung
CC   cancer in a patient and for treating a mammal having lung cancer by
CC   administering a modulatory compound identified. The methods are useful
CC   for treating lung cancer, such as small cell lung cancer, non-small cell
CC   lung cancer or other benign or precancerous lesions, e.g. atelectasis,
CC   emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,
CC   hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and
CC   bronchiectasis. The genes, polynucleotides and polypeptides are useful
CC   for diagnostic purposes and as targets for screening for therapeutic
CC   compounds that modulate lung cancer, such as antibodies. Sequences
CC   ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
CC   invention
XX
SQ   Sequence 228 AA;

  Query Match            100.0%;  Score 1222;  DB 6;  Length 228;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-79;
  Matches  228;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228


RESULT 5
ADN39090
ID   ADN39090 standard; protein; 228 AA.
XX
AC   ADN39090;
XX
DT   17-JUN-2004  (first entry)
XX
DE   Cancer/angiogenesis/fibrosis-related polypeptide, SEQ ID NO:408.
XX
KW   Human; differential expression; cancer; angiogenic disorder;
KW   fibrotic disorder; psoriasis; ischaemia; heart disease; atherosclerosis;
KW   inflammatory disease; autoimmune disease;
KW   retinal neovascularistaion syndrome; scarring; uterine fibroid;
KW   detection; diagnosis; prognosis; drug screening; drug targeting;
KW   wound healing; contraception; cytostatic; cardiant; immunomodulatory;
KW   vulnerary; gene therapy; vaccine.
XX
OS   Homo sapiens.
XX
PN   WO2003042661-A2.
XX
PD   22-MAY-2003.
XX
PF   13-NOV-2002; 2002WO-US036810.
XX
PR   13-NOV-2001; 2001US-0350666P.
PR   21-NOV-2001; 2001US-0332464P.
PR   29-NOV-2001; 2001US-0334393P.
PR   03-DEC-2001; 2001US-0335394P.
PR   14-DEC-2001; 2001US-0340376P.
PR   08-JAN-2002; 2002US-0347211P.
PR   10-JAN-2002; 2002US-0347349P.
PR   08-FEB-2002; 2002US-0355250P.
PR   13-FEB-2002; 2002US-0356714P.
PR   20-FEB-2002; 2002US-0359077P.
PR   29-MAR-2002; 2002US-0368809P.
PR   04-APR-2002; 2002US-0370110P.
PR   12-APR-2002; 2002US-0372246P.
PR   05-JUN-2002; 2002US-0386614P.
PR   16-JUL-2002; 2002US-0396839P.
PR   22-JUL-2002; 2002US-0397775P.
PR   22-JUL-2002; 2002US-0397845P.
PR   09-SEP-2002; 2002US-0409450P.
XX
PA   (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI   Afar D,  Aziz N,  Ginsburg WM,  Gish KC,  Glynne R,  Hevezi PA;
PI   Mack DH,  Murray R,  Watson SR,  Wilson KE,  Zlotnik A;
XX
DR   WPI; 2003-468649/44.
DR   N-PSDB; ADN39089.
XX
PT   Determining the presence or absence of a pathological cell in a patient,
PT   useful for diagnosing, prognosing or treating cancer, comprises detecting
PT   a nucleic acid in a biological sample.
XX
PS   Claim 12; SEQ ID NO 408; 1385pp; English.
XX
CC   The invention relates to nucleic acids and proteins (ADN38683-ADN40064)
CC   whose expression is upregulated or downregulated in specific cancers or
CC   other diseases such as angiogenic or fibrotic disorders, and to methods
CC   of determining the presence or absence of a pathological cell in a
CC   patient by detecting a nucleic acid at least 80% identical to those of
CC   the invention or by detecting a polypeptide of the invention. The
CC   invention also relates to expression vectors and host cells comprising a
CC   nucleic acid of the invention; antibodies which specifically bind a
CC   polypeptide of the invention; use of such antibodies for drug targeting;
CC   and methods of screening for modulators of activity or expression of the
CC   polypeptides and nucleic acids. The nucleic acids, polypeptides,
CC   antibodies and methods are useful for diagnosing, prognosing and treating
CC   cancer and other conditions such as psoriasis, ischaemia, heart disease,
CC   atherosclerosis, inflammatory diseases, autoimmune diseases, retinal
CC   neovascularistaion syndromes, scarring and uterine fibroids. They may
CC   also be useful in wound healing and in contraception. The present
CC   sequence represents a polypeptide of the invention.
XX
SQ   Sequence 228 AA;

  Query Match            100.0%;  Score 1222;  DB 7;  Length 228;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-79;
  Matches  228;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228


RESULT 6
AAY84583
ID   AAY84583 standard; protein; 220 AA.
XX
AC   AAY84583;
XX
DT   25-JUL-2000  (first entry)
XX
DE   Amino acid sequence of a human pre-pro-artemin polypeptide.
XX
```

```
KW   Human; artemin; growth factor; neurotrophic factor; trophic support;
KW   neuron; trigeminal ganglion neuron; nodose ganglion neuron;
KW   superior cervical ganglion neuron; midbrain neuron; Alzheimer's disease;
KW   peripheral neuropathy; amylotrophic lateral sclerosis; ischemic stroke;
KW   Parkinson's disease; Huntington's disease; acute brain injury;
KW   acute spinal cord injury; nervous system tumour; blastoma;
KW   multiple sclerosis; infection; enteric disease; idiopathic constipation;
KW   Parkinson's disease; small cell lung carcinoma.
XX
OS   Homo sapiens.
XX
PN   WO200018799-A1.
XX
PD   06-APR-2000.
XX
PF   29-SEP-1999;   99WO-US022604.
XX
PR   29-SEP-1998;   98US-00163283.
PR   12-NOV-1998;   98US-0108148P.
PR   22-DEC-1998;   98US-00218698.
XX
PA   (UNIW ) UNIV WASHINGTON.
XX
PI   Milbrandt JD,  Baloh RH;
XX
DR   WPI; 2000-293109/25.
DR   N-PSDB; AAA12540.
XX
PT   Isolated artemin growth factor proteins and the nucleic acids that encode
PT   them, useful for treating a range of degenerative neuronal disorders such
PT   as Parkinson's disease and Huntington's disease.
XX
PS   Claim 5; Fig 1B; 96pp; English.
XX
CC   The present sequence represents a pre-pro- artemin growth factor protein.
CC   Artemin is a neurotrophic factor that belongs to the GDNF (glial cell
CC   line-derived neurotrophic factor)/neurturin/persephin family of growth
CC   factors and promotes differentiation, maintains mature phenotype and
CC   provides trophic support, promoting growth and survival of neurons.
CC   Artemin promotes the survival of trigeminal ganglion neurons, nodose
CC   ganglion neurons, superior cervical ganglion neurons and tyrosine-
CC   hydroxylase-expressing dopaminergic ventral midbrain neurons. Artemin is
CC   the only member of the GDNF family that binds to GFR-alpha (growth factor
CC   receptor-alpha) and activates the GFR-alpha3/RET (Ret protein- tyrosine
CC   kinase) receptor complex and additionally, like GDNF and neurturin,
CC   artemin also binds to and activates GFRalpha1/RET. Artemin polypeptides
CC   and polynucleotides are administered to treat peripheral neuropathy,
CC   amylotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease,
CC   Huntington's disease, ischemic stroke, acute brain injury, acute spinal
CC   cord injury, a nervous system tumour (e.g. blastomas), multiple
CC   sclerosis, infection or enteric disease (e.g. idiopathic constipation or
CC   constipation associated with Parkinson's disease, spinal cord injury or
CC   use of opiate pain killers). They may also be used to treat a patient
CC   suffering from small cell lung carcinoma
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 3;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 7
AAY44776
ID   AAY44776 standard; protein; 220 AA.
XX
AC   AAY44776;
XX
DT   17-MAY-2000  (first entry)
XX
DE   Short splice variant of human Enovin.
XX
KW   Enovin; EVN; neurotrophic growth factor; chromosome 1p31.3-32;
KW   glial cell-line derived neurotrophic factor; GDNF; neuroprotective;
KW   GDNF family receptor alpha-3; GFR alpha 3; nootropic; analgesic;
KW   antirheumatic; cerebroprotective; antiparkinsonian; antiinflammatory;
KW   antidiarrhoeal; laxative; antiemetic; neurological disorder; Parkinson's;
KW   Alzheimer's; Huntington's; neuropathy; multiple sclerosis; stroke; pain;
KW   endocrine neoplasia; prion; rheumatic; inflammation; gastrointestinal;
KW   dyspepsia; constipation; intestinal atony; emesis; diarrhoea;
KW   Crohn's disease; bowel hypersensitivity; gene therapy; splice variant.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .39
FT                   /label= Signal_Peptide
FT   Peptide         40. .107
FT                   /label= Pro_sequence
FT   Misc-difference 82. .220
FT                   /note= "This region has been claimed specifically"
FT   Protein         108. .220
FT                   /label= Mature_Enovin
FT                   /note= "Homologous to GDNF, Neurturin and Persephin"
FT   Misc-difference 123
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 150
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 154
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 187
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 188
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Modified-site   202. .204
FT                   /note= "Asn is N-glycosylated"
FT   Misc-difference 216
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 218
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
XX
PN   WO200004050-A2.
XX
PD   27-JAN-2000.
XX
PF   14-JUL-1999;   99WO-EP005031.
XX
PR   14-JUL-1998;   98GB-00015283.
PR   12-FEB-1999;   99US-00248772.
PR   08-JUN-1999;   99US-00327668.
XX
PA   (JANC ) JANSSEN PHARM NV.
XX
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```
PI   Geerts HA,  Masure SLJ,  Meert TF,  Cik M,  Ver Donck LAL;
XX
DR   WPI; 2000-182404/16.
DR   N-PSDB; AAZ50091.
XX
PT   Novel human neurotrophic growth factor designated enovin used to treat
PT   neurological disorders, neuronal disorders, peripheral neuropathy, brain
PT   injury, nervous system disorders, prion associated and gastrointestinal
PT   diseases.
XX
PS   Claim 11; Fig 24; 125pp; English.
XX
CC   The present sequence is a short splice variant of human Enovin (EVN). EVN
CC   is a neurotrophic growth factor, that belongs to glial cell-line derived
CC   neurotrophic factor (GDNF) family. It binds to GDNF family receptor alpha
CC   -3 (GFR alpha 3). Enovin gene is located on chromosome 1p31.3-32. It is
CC   predominantly expressed in heart, skeletal muscle, pancreas and prostate.
CC   It has nootropic, analgesic, neuroprotective, antirheumatic,
CC   cerebroprotective, antiparkinsonian, antiinflammatory, antidiarrhoeal,
CC   laxative and antiemetic activity. It can be used to treat neurological
CC   disorders like Parkinson's, Alzheimer's and Huntington's disease,
CC   neuropathy, multiple sclerosis, endocrine neoplasia, prion associated
CC   diseases, stroke, pain, rheumatic/inflammatory diseases and
CC   gastrointestinal disorders like dyspepsia, constipation, intestinal
CC   atony, emesis, diarrhoea, Crohn's disease and bowel hypersensitivity. EVN
CC   polynucleotide can be used in gene therapy
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 3;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        |||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 8
AAY68710
ID   AAY68710 standard; protein; 220 AA.
XX
AC   AAY68710;
XX
DT   05-MAY-2000  (first entry)
XX
DE   A human pre-pro-neublastin neurotrophic factor.
XX
KW   Neurotrophic factor; neublastin; neurodegenerative disease;
KW   cerebral ischemic neuronal damage; traumatic brain injury;
KW   peripheral neuropathy; Alzheimer's disease; Huntington's disease;
KW   Parkinson's disease; Parkinson-Plus syndrome;
KW   progressive Supranuclear Palsy; Olivopontocerebellar atrophy;
KW   Shy-Drager Syndrome; Guamanian parkinsonism dementia complex;
KW   amyotrophic lateral sclerosis; memory impairment; neuronal disorder;
KW   neuropathy; ischemic stroke; acute brain injury;
KW   acute spinal cord injury; nervous system tumour; multiple sclerosis;
KW   neurotoxin exposure; metabolic disease; diabetes; renal dysfunction;
KW   eye disorder.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Disulfide-bond  43. .108
FT   Disulfide-bond  70. .136
FT   Disulfide-bond  74. .138
FT   Modified-site   122
FT                   /note= "glycosylated residue"
XX
PN   WO200001815-A2.
XX
PD   13-JAN-2000.
XX
PF   05-JUL-1999;   99WO-DK000384.
XX
PR   06-JUL-1998;   98DK-00000904.
PR   09-JUL-1998;   98US-0092229P.
PR   19-AUG-1998;   98DK-00001048.
PR   25-AUG-1998;   98US-0097774P.
PR   06-OCT-1998;   98DK-00001265.
PR   13-OCT-1998;   98US-0103908P.
PR   02-JUL-1999;   99US-00347613.
XX
PA   (NEUR-) NEUROSEARCH AS.
XX
PI   Johansen TE,  Blom N,  Hansen C;
XX
DR   WPI; 2000-171013/15.
DR   N-PSDB; AAZ60563.
XX
PT   New isolated polypeptides, used for treating e.g. neurodegenerative
PT   disease or disorder, neuronal damage or neuronal disorder of the
PT   peripheral nervous system, the medulla or the spinal cord.
XX
PS   Claim 14; Page 97; 106pp; English.
XX
CC   The present sequence represents a neurotrophic factor designated
CC   neublastin. Neublastin is a member of the glial cell line-derived
CC   neurotrophic factor sub-class of the transforming growth factor-beta
CC   superfamily of neurotrophic factors. Neublastin exhibits high affinity
CC   for the GFR-alpha3-RET receptor complex. The polypeptides can be used for
CC   treating a neurodegenerative disease or disorder, cerebral ischemic
CC   neuronal damage, traumatic brain injury, peripheral neuropathy,
CC   Alzheimer's disease, Huntington's disease, Parkinson's disease, Parkinson
CC   -Plus syndromes, progressive Supranuclear Palsy, Olivopontocerebellar
CC   atrophy, Shy-Drager Syndrome, Guamanian parkinsonism dementia complex,
CC   amyotrophic lateral sclerosis, memory impairment, or a neuronal disorder
CC   of the peripheral nervous system, the medulla or the spinal cord. They
CC   can also be used for treating various neuropathies. They can also be used
CC   for treating ischemic stroke, acute brain injury, acute spinal cord
CC   injury, nervous system tumours, multiple sclerosis, exposure to
CC   neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
CC   and damage caused by infectious agents, or various disorders in the eye
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 3;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        |||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
```

```
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 9
AAB50978
ID   AAB50978 standard; protein; 220 AA.
XX
AC   AAB50978;
XX
DT   21-MAR-2001  (first entry)
XX
DE   Human PRO3562 protein.
XX
KW   Human; PRO; cytostatic; nootropic; neuroprotective; respiratory general;
KW   antiinflammatory; antiangiogenic; immunosuppressive; immunostimulant;
KW   PRO agonist; cancer; inflammatory disorder; immunological disorder.
XX
OS   Homo sapiens.
XX
PN   WO200073348-A2.
XX
PD   07-DEC-2000.
XX
PF   30-MAY-2000; 2000WO-US014941.
XX
PR   02-JUN-1999;   99WO-US012252.
PR   22-JUN-1999;   99US-0140650P.
PR   23-JUN-1999;   99US-0141037P.
PR   20-JUL-1999;   99US-0144758P.
PR   01-SEP-1999;   99WO-US020111.
PR   08-SEP-1999;   99WO-US020594.
PR   29-OCT-1999;   99US-0162506P.
PR   30-NOV-1999;   99WO-US028313.
PR   01-DEC-1999;   99WO-US028634.
PR   02-DEC-1999;   99WO-US028551.
PR   09-DEC-1999;   99US-0170262P.
PR   16-DEC-1999;   99WO-US030095.
PR   20-DEC-1999;   99WO-US030999.
PR   06-JAN-2000; 2000WO-US000376.
PR   11-FEB-2000; 2000WO-US003565.
PR   18-FEB-2000; 2000WO-US004341.
PR   18-FEB-2000; 2000WO-US004342.
PR   02-MAR-2000; 2000WO-US005841.
PR   03-MAR-2000; 2000US-0187202P.
PR   10-MAR-2000; 2000WO-US006319.
PR   15-MAR-2000; 2000WO-US006884.
PR   30-MAR-2000; 2000WO-US008439.
PR   17-MAY-2000; 2000WO-US013705.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Goddard A,  Gurney AL,  Hebert C,  Henzel W,  Kabakoff RC;
PI   Shelton DL,  Smith V,  Watanabe CK,  Wood WI;
XX
DR   WPI; 2001-016509/02.
DR   N-PSDB; AAC91580.
XX
PT   Twenty eight nucleic acids encoding PRO polypeptides which are useful for
PT   treating various tumors, e.g. breast cancer, and other inflammatory,
PT   angiogenic and immunological disorders.
XX
PS   Claim 31; Fig 56; 188pp; English.
XX
CC   The present sequence is one of twenty eight novel PRO polypeptides. The
CC   PRO polypeptides and their agonists, including antibodies, peptides, and
CC   small molecule agonists, may be used to treat various tumours, e.g.,
CC   cancers such as breast cancer, ovarian cancer, renal cancer, colorectal
CC   cancer, uterine cancer, prostate cancer, lung cancer, bladder cancer,
CC   central nervous system cancer, melanoma or leukaemia. They are also
CC   useful for treating other disorders such as neuronal, glial, astrocytal,
CC   hypothalamic and other glandular, macrophagal, epithelial, stromal and
CC   blastocoelic disorders, and inflammatory, angiogenic and immunological
CC   disorders
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 4;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||||          ||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 10
AAU86158
ID   AAU86158 standard; protein; 220 AA.
XX
AC   AAU86158;
XX
DT   15-JUL-2002  (first entry)
XX
DE   Human PRO3562 polypeptide.
XX
KW   Human; PRO; benign tumour; malignant tumour; lymphoid malignancy;
KW   leukaemia; neuronal disorder; stromal disorder; blastocoelic disorder;
KW   inflammatory disorder; immune disorder; angiogenic disorder; cytostatic;
KW   neuroprotective.
XX
OS   Homo sapiens.
XX
PN   WO200153486-A1.
XX
PD   26-JUL-2001.
XX
PF   11-FEB-2000; 2000WO-US003565.
XX
PR   08-MAR-1999;   99WO-US005028.
PR   11-MAR-1999;   99US-0123972P.
PR   11-MAY-1999;   99US-0133459P.
PR   02-JUN-1999;   99WO-US012252.
PR   22-JUN-1999;   99US-0140650P.
PR   22-JUN-1999;   99US-0140653P.
PR   20-JUL-1999;   99US-0144758P.
PR   26-JUL-1999;   99US-0145698P.
PR   28-JUL-1999;   99US-0146222P.
PR   17-AUG-1999;   99US-0149395P.
PR   31-AUG-1999;   99US-0151689P.
PR   01-SEP-1999;   99WO-US020111.
PR   15-SEP-1999;   99WO-US021090.
PR   30-NOV-1999;   99WO-US028313.
PR   01-DEC-1999;   99WO-US028301.
PR   01-DEC-1999;   99WO-US028634.
PR   05-JAN-2000; 2000WO-US000219.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Ashkenazi AJ,  Goddard A,  Godowski PJ,  Gurney AL,  Hillan KJ;
PI   Marsters SA,  Pan J,  Pitti RM,  Roy MA,  Smith V,  Stone DM;
PI   Watanabe CK,  Wood WI;
XX
DR   WPI; 2002-205567/26.
DR   N-PSDB; ABK40284.
```

```
XX
PT   Thirty five nucleic acids encoding PRO polypeptides, useful for treating
PT   benign or malignant tumors, leukemias and lymphoid malignancies,
PT   inflammatory, angiogenic and immunologic disorders.
XX
PS   Claim 61; Fig 62; 302pp; English.
XX
CC   The present invention relates to the isolation of novel human PRO
CC   polypeptides and the polynucleotide sequences encoding them. The PRO
CC   polypeptides, agonists, antagonists or anti-PRO antibodies are useful for
CC   treating benign or malignant tumours (e.g. renal, kidney, bladder,
CC   breast, etc), leukaemias and lymphoid malignancies, other disorders such
CC   as neuronal, glial, astrocytal, hypothalamic, glandular, macrophagal,
CC   stromal and blastocoelic disorders, inflammatory, immune and angiogenic
CC   disorders. The polynucleotide sequences are also useful in gene therapy.
CC   AAU86128-AAU86162 represent the human PRO polypeptides of the invention
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 5;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 11
ABB84975
ID   ABB84975 standard; protein; 220 AA.
XX
AC   ABB84975;
XX
DT   16-MAY-2002  (first entry)
XX
DE   Human PRO3562 protein sequence SEQ ID NO:318.
XX
KW   Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive;
KW   vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma;
KW   gene therapy; cardiovascular disorder; endothelial disorder; cancer;
KW   angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension;
KW   age-related macular degeneration; arterial restenosis; angina;
KW   rheumatoid arthritis; myocardial infarction; thrombophlebitis;
KW   lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
KW   wound healing; chromosome mapping; gene mapping.
XX
OS   Homo sapiens.
XX
PN   WO200200690-A2.
XX
PD   03-JAN-2002.
XX
PF   20-JUN-2001; 2001WO-US019692.
XX
PR   23-JUN-2000; 2000US-0213637P.
PR   20-JUL-2000; 2000US-0219556P.
PR   25-JUL-2000; 2000US-0220624P.
PR   25-JUL-2000; 2000US-0220664P.
PR   28-JUL-2000; 2000WO-US020710.
PR   02-AUG-2000; 2000US-0222695P.
PR   17-AUG-2000; 2000US-00643657.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   07-SEP-2000; 2000US-0230978P.
PR   18-SEP-2000; 2000US-00664610.
PR   18-SEP-2000; 2000US-00665350.
PR   24-OCT-2000; 2000US-0242922P.
PR   08-NOV-2000; 2000US-00709238.
PR   08-NOV-2000; 2000WO-US030952.
PR   10-NOV-2000; 2000WO-US030873.
PR   01-DEC-2000; 2000WO-US032678.
PR   20-DEC-2000; 2000US-00747259.
PR   20-DEC-2000; 2000WO-US034956.
PR   22-JAN-2001; 2001US-00767609.
PR   28-FEB-2001; 2001US-00796498.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-MAR-2001; 2001WO-US006666.
PR   09-MAR-2001; 2001US-00802706.
PR   14-MAR-2001; 2001US-00808689.
PR   22-MAR-2001; 2001US-00816744.
PR   05-APR-2001; 2001US-00828366.
PR   10-MAY-2001; 2001US-00854208.
PR   10-MAY-2001; 2001US-00854280.
PR   25-MAY-2001; 2001US-00866028.
PR   25-MAY-2001; 2001US-00866034.
PR   25-MAY-2001; 2001WO-US017092.
PR   30-MAY-2001; 2001US-00870574.
PR   30-MAY-2001; 2001WO-US017443.
PR   01-JUN-2001; 2001WO-US017800.
XX
PA   (GETH ) GENENTECH INC.
XX
PI   Baker KP,  Ferrara N,  Gerber H,  Gerritsen ME,  Goddard A;
PI   Godowski PJ,  Gurney AL,  Hillan KJ,  Marsters SA,  Pan J,  Paoni NF;
PI   Stephan JF,  Watanabe CK,  Williams PM,  Wood WI,  Ye W;
XX
DR   WPI; 2002-090516/12.
DR   N-PSDB; ABL88230.
XX
PT   One hundred and eighty seven nucleic acids encoding PRO polypeptides,
PT   useful in diagnosis and treatment of cardiovascular (e.g. myocardial
PT   infarction), endothelial or angiogenic disorders in a mammal.
XX
PS   Claim 11; Fig 318; 565pp; English.
XX
CC   ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to
CC   ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic,
CC   antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic
CC   activities, and can be used in gene therapy. The PRO polynucleotides,
CC   proteins, agonists and antagonists are useful for treating or diagnosing
CC   a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g.
CC   cardiac hypertrophy, trauma, cancer, age-related macular degeneration,
CC   atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis,
CC   angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour
CC   angiogenesis (such as breast carcinoma and liver carcinoma) and wound
CC   healing. The PRO polynucleotides have applications in molecular biology,
CC   including use as hybridisation probes, and in chromosome and gene
CC   mapping. ABL88259 to ABL88267 represent primers and probes used in the
CC   exemplification of the present invention
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 5;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112
```

```
Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 12
ABG30698
ID ABG30698 standard; protein; 220 AA.
XX
AC ABG30698;
XX
DT 07-OCT-2002 (first entry)
XX
DE Human artemin polypeptide #1.
XX
KW Human; artemin; hyperalgesia; trauma; surgery; stroke; ischaemia;
KW infection; metabolic disease; nutritional deficiency; malignancy;
KW peripheral neuropathy; diabetic neuropathy; neuronal death;
KW neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;
KW Huntington's chorea; necrosis; neuroprotective; cerebroprotective;
KW analgesic; nootropic; protein therapy.
XX
OS Homo sapiens.
XX
PN WO200251433-A2.
XX
PD 04-JUL-2002.
XX
PF 19-DEC-2001; 2001WO-US050112.
XX
PR 22-DEC-2000; 2000US-0257601P.
XX
PA (GETH) GENENTECH INC.
XX
PI Shelton DL, Phillips HS;
XX
DR WPI; 2002-575358/61.
DR N-PSDB; ABK88906.
XX
PT Use of artemin and its agonist for manufacturing a medicament for
PT protecting neurons from injury-induced pathological changes and for
PT treating damage to neurons in a mammal without accompanying mechanical or
PT thermal hyperalgesia.
XX
PS Claim 21; Fig 3; 94pp; English.
XX
CC The invention relates to the use of artemin or its agonist in the
CC manufacture of a medicament for protecting neurons in a mammal from
CC injury-induced pathological changes without accompanying mechanical or
CC thermal hyperalgesia. Artemin and its agonist are useful for treating
CC damage to neurons in a mammal without accompanying mechanical or thermal
CC hyperalgesia, where the injury is associated with trauma, a toxic agent,
CC adverse side effects of other therapeutic agents, surgery, stroke,
CC ischaemia, infection, metabolic disease, nutritional deficiency,
CC malignancy or peripheral neuropathy (such as diabetic neuropathy).
CC Artemin may also be used to prevent neuronal death and increase neuronal
CC survival and in treating, preventing and ameliorating neurodegenerative
CC disorders such as Alzheimer's disease, Parkinson's disease, Huntington's
CC chorea, peripheral neuropathies and other conditions characterised by
CC necrosis or loss of neurons. This sequence represents a human artemin
CC polypeptide of the invention
XX
SQ Sequence 220 AA;

Query Match 95.7%; Score 1170; DB 5; Length 220;
Best Local Similarity 96.5%; Pred. No. 6.6e-76;
Matches 220; Conservative 0; Mismatches 0; Indels 8; Gaps 1;

```
Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 13
ABB82388
ID ABB82388 standard; protein; 220 AA.
XX
AC ABB82388;
XX
DT 08-JAN-2003 (first entry)
XX
DE Human neublastin (NBN) polypeptide.
XX
KW NBN; neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
KW human.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .80
FT /note= "signal peptide"
FT Protein 81. .220
FT /note= "mature protein"
XX
PN WO200278730-A2.
XX
PD 10-OCT-2002.
XX
PF 28-FEB-2002; 2002WO-US006388.
XX
PR 28-MAR-2001; 2001US-00820421.
PR 28-MAR-2001; 2001US-0287554P.
XX
PA (BIOJ) BIOGEN INC.
XX
PI Sah DWY;
XX
DR WPI; 2002-740922/80.
DR N-PSDB; ABV73226.
XX
PT Treating neuropathic pain in a subject comprises administering a
PT formulation comprising a neublastin polypeptide.
XX
PS Claim 8; Page 53-54; 69pp; English.
XX
CC The invention relates to treating neuropathic pain in a subject and
CC involves administering a formulation comprising a neublastin (NBN)
CC polypeptide. The method is useful for treating, preventing or delaying
CC neuropathic pain. The present sequence represents the human neublastin
CC (NBN) polypeptide
XX
SQ Sequence 220 AA;

Query Match 95.7%; Score 1170; DB 5; Length 220;
Best Local Similarity 96.5%; Pred. No. 6.6e-76;
Matches 220; Conservative 0; Mismatches 0; Indels 8; Gaps 1;

```
Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||
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Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 14
ABB95581
ID   ABB95581 standard; protein; 220 AA.
XX
AC   ABB95581;
XX
DT   19-JUL-2002  (first entry)
XX
DE   Human angiogenesis related protein PRO3562 SEQ ID NO: 318.
XX
KW   Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer;
KW   atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder;
KW   cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
KW   antiarteriosclerotic.
XX
OS   Homo sapiens.
XX
PN   WO200208284-A2.
XX
PD   31-JAN-2002.
XX
PF   09-JUL-2001; 2001WO-US021735.
XX
PR   20-JUL-2000; 2000US-0219556P.
PR   25-JUL-2000; 2000US-0220624P.
PR   25-JUL-2000; 2000US-0220664P.
PR   28-JUL-2000; 2000WO-US020710.
PR   02-AUG-2000; 2000US-0222695P.
PR   17-AUG-2000; 2000US-00643657.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   07-SEP-2000; 2000US-0230978P.
PR   18-SEP-2000; 2000US-00664610.
PR   18-SEP-2000; 2000US-00665350.
PR   24-OCT-2000; 2000US-0242922P.
PR   08-NOV-2000; 2000US-00709238.
PR   08-NOV-2000; 2000WO-US030952.
PR   10-NOV-2000; 2000WO-US030873.
PR   01-DEC-2000; 2000WO-US032678.
PR   20-DEC-2000; 2000US-00747259.
PR   20-DEC-2000; 2000WO-US034956.
PR   22-JAN-2001; 2001US-00767609.
PR   28-FEB-2001; 2001US-00796498.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-MAR-2001; 2001WO-US006666.
PR   09-MAR-2001; 2001US-00802706.
PR   14-MAR-2001; 2001US-00808689.
PR   22-MAR-2001; 2001US-00816744.
PR   05-APR-2001; 2001US-00828366.
PR   10-MAY-2001; 2001US-00854208.
PR   10-MAY-2001; 2001US-00854280.
PR   25-MAY-2001; 2001US-00866028.
PR   25-MAY-2001; 2001US-00866034.
PR   25-MAY-2001; 2001WO-US017092.
PR   30-MAY-2001; 2001US-00870574.
PR   30-MAY-2001; 2001WO-US017443.
PR   01-JUN-2001; 2001WO-US017800.
PR   20-JUN-2001; 2001WO-US019692.
XX
PA   (GETH ) GENENTECH INC.
PA   (BAKE/) BAKER K P.
PA   (FERR/) FERRARA N.
PA   (GERB/) GERBER H.
PA   (GERR/) GERRITSEN M E.
PA   (GODD/) GODDARD A.
PA   (GODO/) GODOWSKI P J.
PA   (GURN/) GURNEY A L.
PA   (HILL/) HILLAN K J.
PA   (MARS/) MARSTERS S A.
PA   (PANJ/) PAN J.
PA   (PAON/) PAONI N F.
PA   (STEP/) STEPHAN J F.
PA   (WATA/) WATANABE C K.
PA   (WILL/) WILLIAMS P M.
PA   (WOOD/) WOOD W I.
XX
PI   Baker KP,  Ferrara N,  Gerber H,  Gerritsen ME,  Goddard A;
PI   Godowski PJ,  Gurney AL,  Hillan KJ,  Marsters SA,  Pan J,  Paoni NF;
PI   Stephan JF,  Watanabe CK,  Williams PM,  Wood WI,  Ye W;
XX
DR   WPI; 2002-171999/22.
DR   N-PSDB; ABL95719.
XX
PT   One hundred and eighty seven nucleic acids encoding PRO polypeptides,
PT   useful in diagnosis and treatment of cardiovascular (e.g. myocardial
PT   infarction), endothelial or angiogenic disorders in a mammal.
XX
PS   Claim 11; Fig 318; 567pp; English.
XX
CC   The present invention provides the protein and coding sequences of human
CC   PRO proteins. These are useful for treating or diagnosing a
CC   cardiovascular, endothelial or angiogenic disorder, including cardiac
CC   hypertrophy, trauma, cancer, age-related macular degeneration,
CC   atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis,
CC   angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour
CC   angiogenesis (such as breast carcinoma and liver carcinoma) and wound
CC   healing. The present sequence is a PRO protein of the invention
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 5;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

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Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
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Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
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RESULT 15
AAO22940
ID   AAO22940 standard; protein; 220 AA.
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AC   AAO22940;
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DT   19-DEC-2002  (first entry)
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DE   Human foetal brain neublastin protein.
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KW   Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW   tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW   neublastin; ischemic neuronal damage; traumatic brain injury;
KW   peripheral neuropathy; neuropathic pain; Alzheimer's disease; diabetes;
KW   Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW   memory impairment; renal disease; glaucoma; gene therapy; human.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
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FT   Disulfide-bond  43. .108
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Disulfide-bond  70. .136
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Disulfide-bond  74. .138
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Protein         81. .220
FT                   /label= Mature_protein
FT   Disulfide-bond  107
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Modified-site   122
FT                   /note= "Asn is N-glycosylated"
XX
PN   WO200272826-A2.
XX
PD   19-SEP-2002.
XX
PF   12-MAR-2002; 2002WO-EP002691.
XX
PR   12-MAR-2001; 2001US-00804615.
XX
PA   (BIOJ ) BIOGEN INC.
PA   (NSGE-) NS GENE AS.
XX
PI   Sah DWY, Johansen TE, Rossomando A;
XX
DR   WPI; 2002-713515/77.
DR   N-PSDB; AAL53462.
XX
PT   New truncated neublastin polypeptides lacking one or more amino-terminal
PT   amino acids of a mature neublastin polypeptide useful for treating
PT   neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT   pain, brain injury.
XX
PS   Claim 77; Page 118-119; 138pp; English.
XX
CC   The invention relates to a truncated neublastin polypeptide comprising an
CC   amino acid terminus that lacks one or more amino-terminal amino acids of
CC   a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC   useful for treating neurodegenerative disorders such as ischemic neuronal
CC   damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC   Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC   amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC   diseases, or glaucoma by moderating metabolism, growth, differentiation
CC   or survival of a nerve or neuronal cell. The polynucleotides of the
CC   invention can be used to treat disorders by gene therapy. This sequence
CC   represents a human foetal brain neublastin protein of the invention
XX
SQ   Sequence 220 AA;

  Query Match             95.7%;  Score 1170;  DB 5;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 6.6e-76;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
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Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
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Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
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Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
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Job time : 101.604 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:32:32 ; Search time 31.2941 Seconds
(without alignments)
543.872 Million cell updates/sec

Title: US-09-357-349D-9
Perfect score: 1222
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 228

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

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Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

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SUMMARIES

Result No.	Score	Query Match %	Length	DB	ID	Description
1	1170	95.7	220	3	US-09-220-528-26	Sequence 26, Appl
2	1170	95.7	220	4	US-09-347-613C-9	Sequence 9, Appli
3	1170	95.7	220	4	US-09-347-613C-35	Sequence 35, Appl
4	1170	95.7	220	4	US-09-662-183A-9	Sequence 9, Appli
5	1170	95.7	220	4	US-09-662-183A-35	Sequence 35, Appl
6	1110	90.8	237	3	US-09-220-528-32	Sequence 32, Appl
7	1097	89.8	237	4	US-09-347-613C-4	Sequence 4, Appli
8	1097	89.8	237	4	US-09-662-183A-4	Sequence 4, Appli
9	979	80.1	181	3	US-09-220-528-40	Sequence 40, Appl
10	868.5	71.1	200	4	US-09-347-613C-2	Sequence 2, Appli
11	868.5	71.1	200	4	US-09-662-183A-2	Sequence 2, Appli
12	850	69.6	224	3	US-09-220-528-29	Sequence 29, Appl
13	850	69.6	224	4	US-09-347-613C-16	Sequence 16, Appl
14	850	69.6	224	4	US-09-662-183A-16	Sequence 16, Appl
15	846	69.2	159	3	US-09-220-528-12	Sequence 12, Appl
16	846	69.2	159	3	US-09-220-528-89	Sequence 89, Appl
17	754	61.7	140	3	US-09-220-528-5	Sequence 5, Appli
18	754	61.7	140	4	US-09-347-613C-10	Sequence 10, Appl
19	754	61.7	140	4	US-09-662-183A-10	Sequence 10, Appl
20	745	61.0	185	3	US-09-220-528-41	Sequence 41, Appl
21	742	60.7	140	4	US-09-347-613C-5	Sequence 5, Appli
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23	622	50.9	144	3	US-09-220-528-36	Sequence 36, Appl
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25	614	50.2	116	4	US-09-347-613C-11	Sequence 11, Appl
26	614	50.2	116	4	US-09-662-183A-11	Sequence 11, Appl
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28	602	49.3	116	4	US-09-662-183A-6	Sequence 6, Appli
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32	589	48.2	113	4	US-09-347-613C-7	Sequence 7, Appli
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36	528	43.2	113	3	US-09-220-528-34	Sequence 34, Appl
37	515	42.1	96	3	US-09-220-528-19	Sequence 19, Appl
38	480	39.3	96	3	US-09-220-528-33	Sequence 33, Appl
39	458	37.5	90	3	US-09-220-528-75	Sequence 75, Appl
40	378	30.9	68	3	US-09-220-528-50	Sequence 50, Appl
41	322	26.4	111	3	US-09-220-528-53	Sequence 53, Appl
42	282	23.1	87	3	US-09-220-528-115	Sequence 115, App
43	253.5	20.7	197	1	US-08-519-777-7	Sequence 7, Appli
44	253.5	20.7	197	1	US-08-742-035-7	Sequence 7, Appli
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ALIGNMENTS

RESULT 1
US-09-220-528-26
; Sequence 26, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
; FILE REFERENCE: 6029-7998
; CURRENT APPLICATION NUMBER: US/09/220,528A
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; EARLIER APPLICATION NUMBER: 60/108,148
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; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-26

Query Match 95.7%; Score 1170; DB 3; Length 220;
Best Local Similarity 96.5%; Pred. No. 5.1e-81;
Matches 220; Conservative 0; Mismatches 0; Indels 8; Gaps 1;

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Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

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RESULT 2
US-09-347-613C-9
; Sequence 9, Application US/09347613C
; Patent No. 6593133

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; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 220
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US-09-347-613C-9

  Query Match             95.7%;  Score 1170;  DB 4;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.1e-81;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
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RESULT 3
US-09-347-613C-35
; Sequence 35, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
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;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-35

  Query Match             95.7%;  Score 1170;  DB 4;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.1e-81;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
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Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
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Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 4
US-09-662-183A-9
; Sequence 9, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-662-183A-9

  Query Match             95.7%;  Score 1170;  DB 4;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.1e-81;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;
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Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 5
US-09-662-183A-35
; Sequence 35, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; APPLICANT: Blom, Nikolaj
; APPLICANT: Hansen, Claus
; TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
; FILE REFERENCE: 19313-001 DIV
; CURRENT APPLICATION NUMBER: US/09/662,183A
; CURRENT FILING DATE: 2000-09-14
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: DANISH 1998 01260
; PRIOR FILING DATE: 1998-10-05
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06
; PRIOR APPLICATION NUMBER: 09/347,613
; PRIOR FILING DATE: 2000-07-02
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 35
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-662-183A-35

Query Match 95.7%; Score 1170; DB 4; Length 220;
Best Local Similarity 96.5%; Pred. No. 5.1e-81;
Matches 220; Conservative 0; Mismatches 0; Indels 8; Gaps 1;

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Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 6
US-09-220-528-32
; Sequence 32, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
; FILE REFERENCE: 6029-7998
; CURRENT APPLICATION NUMBER: US/09/220,528A
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 237
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-32

Query Match 90.8%; Score 1110; DB 3; Length 237;
Best Local Similarity 99.5%; Pred. No. 1.8e-76;
Matches 208; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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Qy         20 QAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 79
              :||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         29 EAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 88

Qy         80 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVP 139
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         89 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVP 148

Qy        140 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        149 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 208

Qy        200 RYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||
Db        209 RYEAVSFMDVNSTWRTVDRLSATACGCLG 237
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RESULT 7
US-09-347-613C-4
; Sequence 4, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; APPLICANT: Blom, Nikolaj
; APPLICANT: Hansen, Claus
; TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
; FILE REFERENCE: NeuroSearch 19313-001
; CURRENT APPLICATION NUMBER: US/09/347,613C
; CURRENT FILING DATE: 1999-07-02
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: DANISH 1998 01260
; PRIOR FILING DATE: 1998-10-05
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06

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;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
;   LENGTH: 237
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-4

  Query Match             89.8%;  Score 1097;  DB 4;  Length 237;
  Best Local Similarity   98.1%;  Pred. No. 1.7e-75;
  Matches  205;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         20 QAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 79
              :|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         29 EAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 88

Qy         80 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVP 139
              ||||||||||||||||||||||||||||||||||||||:||||||||||||||||||||
Db         89 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGNRARAAGARGCRLRSQLVP 148

Qy        140 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        149 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 208

Qy        200 RYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||  |||||
Db        209 RYEAVSFMDVNSTWRTVDRLSANPCGCLG 237


RESULT 8
US-09-662-183A-4
; Sequence 4, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
;   LENGTH: 237
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-662-183A-4

  Query Match             89.8%;  Score 1097;  DB 4;  Length 237;
  Best Local Similarity   98.1%;  Pred. No. 1.7e-75;
  Matches  205;  Conservative    2;  Mismatches    2;  Indels    0;  Gaps    0;

Qy         20 QAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 79
              :|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         29 EAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 88

Qy         80 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVP 139
              ||||||||||||||||||||||||||||||||||||||:||||||||||||||||||||
Db         89 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGNRARAAGARGCRLRSQLVP 148

Qy        140 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        149 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 208

Qy        200 RYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||  |||||
Db        209 RYEAVSFMDVNSTWRTVDRLSANPCGCLG 237


RESULT 9
US-09-220-528-40
; Sequence 40, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 40
;   LENGTH: 181
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-528-40

  Query Match             80.1%;  Score 979;  DB 3;  Length 181;
  Best Local Similarity   100.0%;  Pred. No. 1e-66;
  Matches  181;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         48 SLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSAL 107
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 SLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSAL 60

Qy        108 PRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARS 167
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARS 120

Qy        168 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 227
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 180

Qy        228 G 228
              |
Db        181 G 181


RESULT 10
US-09-347-613C-2
; Sequence 2, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
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;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 200
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-2

  Query Match             71.1%;  Score 868.5;  DB 4;  Length 200;
  Best Local Similarity   86.1%;  Pred. No. 2.4e-58;
  Matches  173;  Conservative    6;  Mismatches   19;  Indels    3;  Gaps    3;

Qy          29 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 88
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db           2 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 61

Qy          89 PPPQP-SRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 147
               |  :  |  ||    |  : ||  |||| ||  :|: : || ||||||||||||||||||
Db          62 PRRRHFSARAPAACTPICSSPR-VRAARLGGRAARSGSGGA-GCRLRSQLVPVRALGLGH 119

Qy         148 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 207
               ||||||||||:||| ||||||||||||||||||||||||||||||||||||||||||||
Db         120 RSDELVRFRFCTGSCPRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 179

Qy         208 DVNSTWRTVDRLSATACGCLG 228
               |||||||||||||||||||||
Db         180 DVNSTWRTVDRLSATACGCLG 200


RESULT 11
US-09-662-183A-2
; Sequence 2, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 200
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-662-183A-2

  Query Match             71.1%;  Score 868.5;  DB 4;  Length 200;
  Best Local Similarity   86.1%;  Pred. No. 2.4e-58;
  Matches  173;  Conservative    6;  Mismatches   19;  Indels    3;  Gaps    3;

Qy          29 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 88
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db           2 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 61

Qy          89 PPPQP-SRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 147
               |  :  |  ||    |  : ||  |||| ||  :|: : || ||||||||||||||||||
Db          62 PRRRHFSARAPAACTPICSSPR-VRAARLGGRAARSGSGGA-GCRLRSQLVPVRALGLGH 119

Qy         148 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 207
               ||||||||||:||| ||||||||||||||||||||||||||||||||||||||||||||
Db         120 RSDELVRFRFCTGSCPRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 179

Qy         208 DVNSTWRTVDRLSATACGCLG 228
               |||||||||||||||||||||
Db         180 DVNSTWRTVDRLSATACGCLG 200


RESULT 12
US-09-220-528-29
; Sequence 29, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: MURINE
US-09-220-528-29

  Query Match             69.6%;  Score 850;  DB 3;  Length 224;
  Best Local Similarity   73.3%;  Pred. No. 6.6e-57;
  Matches  170;  Conservative    6;  Mismatches   44;  Indels   12;  Gaps    2;

Qy           1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
               |||||    : ||||  || |:       | ||||| ||||| | ||||    |||| |:
Db           1 MELGLAEPTALSHCLRPRWQS--------AWWPTLAVLALLSCVTEASLDPMSRSPAARD 52

Qy          61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARA 116
               || |||| |  ||||| ||  || |  |||||  :|||||| |    | |  || |||||
Db          53 GPSPVLAPPTDHLPGGHTAHLCSERTLRPPPQSPQPAPPPPGPALQSPPAALRGARAARA 112

Qy         117 GGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASL 176
               |    ||||   |||||||||||||| ||||| ||||:||||||||||||| ||||||||
Db         113 GTRSSRARTTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLASL 172

Qy         177 LGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
               ||||||| |||||:|||||||||||||||||||||||| ||||||||||
Db         173 LGAGALRSPPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 13
US-09-347-613C-16
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; Sequence 16, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: Murinae gen. sp.
US-09-347-613C-16

  Query Match             69.6%;  Score 850;  DB 4;  Length 224;
  Best Local Similarity   73.3%;  Pred. No. 6.6e-57;
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Qy        117 GGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASL 176
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Db        113 GTRSSRARTTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLASL 172

Qy        177 LGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
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Db        173 LGAGALRSPPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 14
US-09-662-183A-16
; Sequence 16, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: Murinae gen. sp.
US-09-662-183A-16

  Query Match             69.6%;  Score 850;  DB 4;  Length 224;
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Qy        117 GGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASL 176
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US-09-220-528-12
; Sequence 12, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 12
;   LENGTH: 159
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-528-12

  Query Match             69.2%;  Score 846;  DB 3;  Length 159;
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Qy        131 CRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRP 190
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GenCore version 5.1.6

OM protein - protein search, using sw model

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Perfect score: 1222
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Total number of hits satisfying chosen parameters: 1407402

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	1222	100.0	228	15	US-10-295-027-408	Sequence 408, App
2	1170	95.7	220	9	US-09-220-920-26	Sequence 26, Appl
3	1170	95.7	220	9	US-09-804-615-9	Sequence 9, Appli
4	1170	95.7	220	13	US-10-001-054-56	Sequence 56, Appl
5	1170	95.7	220	14	US-10-223-085-318	Sequence 318, App
6	1170	95.7	220	14	US-10-223-084-318	Sequence 318, App
7	1170	95.7	220	14	US-10-223-088-318	Sequence 318, App
8	1170	95.7	220	14	US-10-223-090-318	Sequence 318, App
9	1170	95.7	220	14	US-10-223-087-318	Sequence 318, App
10	1170	95.7	220	14	US-10-223-083-318	Sequence 318, App
11	1170	95.7	220	14	US-10-223-089-318	Sequence 318, App
12	1170	95.7	220	14	US-10-210-951-62	Sequence 62, Appl
13	1170	95.7	220	14	US-10-211-884-62	Sequence 62, Appl
14	1170	95.7	220	14	US-10-223-081-318	Sequence 318, App
15	1170	95.7	220	14	US-10-223-082-318	Sequence 318, App
16	1170	95.7	220	15	US-10-211-858-62	Sequence 62, Appl
17	1170	95.7	220	15	US-10-305-654-318	Sequence 318, App
18	1170	95.7	220	15	US-10-295-027-402	Sequence 402, App
19	1170	95.7	220	15	US-10-295-027-404	Sequence 404, App
20	1170	95.7	220	15	US-10-081-056-318	Sequence 318, App
21	1170	95.7	220	15	US-10-669-853-2	Sequence 2, Appli
22	1170	95.7	220	16	US-10-661-984A-9	Sequence 9, Appli
23	1110	90.8	237	9	US-09-220-920-32	Sequence 32, Appl
24	1110	90.8	237	15	US-10-295-027-406	Sequence 406, App
25	1110	90.8	238	9	US-09-813-398-40	Sequence 40, Appl
26	1097	89.8	237	9	US-09-804-615-4	Sequence 4, Appli
27	1097	89.8	237	16	US-10-661-984A-4	Sequence 4, Appli
28	979	80.1	181	9	US-09-220-920-40	Sequence 40, Appl
29	878	71.8	224	9	US-09-804-615-34	Sequence 34, Appl
30	878	71.8	224	15	US-10-669-853-5	Sequence 5, Appli
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34	850	69.6	224	9	US-09-220-920-29	Sequence 29, Appl
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36	850	69.6	224	15	US-10-669-853-4	Sequence 4, Appli
37	850	69.6	224	16	US-10-661-984A-16	Sequence 16, Appl
38	846	69.2	159	9	US-09-220-920-12	Sequence 12, Appl
39	846	69.2	159	9	US-09-220-920-89	Sequence 89, Appl
40	754	61.7	140	9	US-09-220-920-5	Sequence 5, Appli
41	754	61.7	140	9	US-09-804-615-10	Sequence 10, Appl
42	754	61.7	140	15	US-10-669-853-11	Sequence 11, Appl
43	754	61.7	140	16	US-10-661-984A-10	Sequence 10, Appl
44	745	61.0	185	9	US-09-220-920-41	Sequence 41, Appl
45	742	60.7	140	9	US-09-804-615-5	Sequence 5, Appli

ALIGNMENTS

RESULT 1
US-10-295-027-408
; Sequence 408, Application US/10295027
; Publication No. US20030232350A1
; GENERAL INFORMATION:
; APPLICANT: Afar, Daniel
; APPLICANT: Aziz, Natasha
; APPLICANT: Ginsberg, Wendy M.
; APPLICANT: Gish, Kurt C.
; APPLICANT: Glynne, Richard
; APPLICANT: Hevezi, Peter A.
; APPLICANT: Mack, David H.
; APPLICANT: Murray, Richard
; APPLICANT: Watson, Susan R.
; APPLICANT: Eos Biotechnology, Inc.
; TITLE OF INVENTION: Methods of Diagnosis of Cancer, Compositions and
; TITLE OF INVENTION: Methods of Screening for Modulators of Cancer
; FILE REFERENCE: 018501-012500US
; CURRENT APPLICATION NUMBER: US/10/295,027
; CURRENT FILING DATE: 2002-11-13
; PRIOR APPLICATION NUMBER: US 09/663,733
; PRIOR FILING DATE: 2000-09-15
; PRIOR APPLICATION NUMBER: US 60/350,666
; PRIOR FILING DATE: 2001-11-13
; PRIOR APPLICATION NUMBER: US 60/335,394
; PRIOR FILING DATE: 2001-11-15
; PRIOR APPLICATION NUMBER: US 60/332,464
; PRIOR FILING DATE: 2001-11-21
; PRIOR APPLICATION NUMBER: US 60/334,393
; PRIOR FILING DATE: 2001-11-29
; PRIOR APPLICATION NUMBER: US 60/340,376
; PRIOR FILING DATE: 2001-12-14
; PRIOR APPLICATION NUMBER: US 60/347,211
; PRIOR FILING DATE: 2002-01-08
; PRIOR APPLICATION NUMBER: US 60/347,349
; PRIOR FILING DATE: 2002-01-10

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;  PRIOR APPLICATION NUMBER: US 60/355,250
;  PRIOR FILING DATE: 2002-02-08
;  PRIOR APPLICATION NUMBER: US 60/356,714
;  PRIOR FILING DATE: 2002-02-13
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 1386
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 408
;   LENGTH: 228
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-295-027-408

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RESULT 2
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; Sequence 26, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
;  FILE REFERENCE: 6029-7996
;  CURRENT APPLICATION NUMBER: US/09/220,920
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-920-26

  Query Match             95.7%;  Score 1170;  DB 9;  Length 220;
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  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

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RESULT 3
US-09-804-615-9
; Sequence 9, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-804-615-9

  Query Match             95.7%;  Score 1170;  DB 9;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

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; Sequence 56, Application US/10001054
; Publication No. US20020192209A1
; GENERAL INFORMATION:
;  APPLICANT: Genentech, Inc.
;  APPLICANT:  Baker, Kevin
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Gurney,Austin
;  APPLICANT:  Hebert,Carolyn
;  APPLICANT:  Henzel,William
;  APPLICANT:  Kabakoff,Rhona
```

; APPLICANT: Shelton,David
; APPLICANT: Smith,Victoria
; APPLICANT: Watanabe,Colin
; APPLICANT: Wood, William
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR INHIBITING NEOPLASTIC
; TITLE OF INVENTION: CELL GROWTH
; FILE REFERENCE: P3034R1PCT
; CURRENT APPLICATION NUMBER: US/10/001,054
; CURRENT FILING DATE: 2001-11-30
; PRIOR APPLICATION NUMBER: 60/059114
; PRIOR FILING DATE: 1997-09-17
; PRIOR APPLICATION NUMBER: 60/079689
; PRIOR FILING DATE: 1998-03-27
; PRIOR APPLICATION NUMBER: 60/079920
; PRIOR FILING DATE: 1998-03-30
; PRIOR APPLICATION NUMBER: 60/082999
; PRIOR FILING DATE: 1998-04-24
; PRIOR APPLICATION NUMBER: 60/083545
; PRIOR FILING DATE: 1998-04-29
; PRIOR APPLICATION NUMBER: 60/085149
; PRIOR FILING DATE: 1998-05-12
; PRIOR APPLICATION NUMBER: 60/087607
; PRIOR FILING DATE: 1998-06-02
; PRIOR APPLICATION NUMBER: 60/088858
; PRIOR FILING DATE: 1998-06-11
; PRIOR APPLICATION NUMBER: 60/090691
; PRIOR FILING DATE: 1998-06-25
; PRIOR APPLICATION NUMBER: 60/096891
; PRIOR FILING DATE: 1998-08-17
; PRIOR APPLICATION NUMBER: 60/096894
; PRIOR FILING DATE: 1998-08-17
; PRIOR APPLICATION NUMBER: 60/099803
; PRIOR FILING DATE: 1998-09-10
; PRIOR APPLICATION NUMBER: 60/100263
; PRIOR FILING DATE: 1998-09-14
; PRIOR APPLICATION NUMBER: 60/100390
; PRIOR FILING DATE: 1998-09-15
; PRIOR APPLICATION NUMBER: 60/101476
; PRIOR FILING DATE: 1998-09-23
; PRIOR APPLICATION NUMBER: 60/107783
; PRIOR FILING DATE: 1998-11-10
; PRIOR APPLICATION NUMBER: 60/108849
; PRIOR FILING DATE: 1998-11-18
; PRIOR APPLICATION NUMBER: 60/112420
; PRIOR FILING DATE: 1998-12-15
; PRIOR APPLICATION NUMBER: 60/113296
; PRIOR FILING DATE: 1998-12-22
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; PRIOR FILING DATE: 1999-01-12
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; PRIOR FILING DATE: 1999-01-12
; PRIOR APPLICATION NUMBER: 60/116533
; PRIOR FILING DATE: 1999-01-20
; PRIOR APPLICATION NUMBER: 60/123618
; PRIOR FILING DATE: 1999-03-10
; PRIOR APPLICATION NUMBER: 60/131294
; PRIOR FILING DATE: 1999-04-07
; PRIOR APPLICATION NUMBER: 60/140650
; PRIOR FILING DATE: 1999-06-22
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; PRIOR FILING DATE: 1999-07-20
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; PRIOR APPLICATION NUMBER: 60/209832
; PRIOR FILING DATE: 2000-06-05
; PRIOR APPLICATION NUMBER: 60/232887
; PRIOR FILING DATE: 2000-09-15
; PRIOR APPLICATION NUMBER: 09/180997
; PRIOR FILING DATE: 1998-11-19
; PRIOR APPLICATION NUMBER: 09/218517
; PRIOR FILING DATE: 1998-12-22
; PRIOR APPLICATION NUMBER: 09/284291
; PRIOR FILING DATE: 1999-04-12
; PRIOR APPLICATION NUMBER: 09/380137
; PRIOR FILING DATE: 1999-08-25
; PRIOR APPLICATION NUMBER: 09/380138
; PRIOR FILING DATE: 1999-08-25
; PRIOR APPLICATION NUMBER: 09/380913
; PRIOR FILING DATE: 1999-09-09
; PRIOR APPLICATION NUMBER: 09/403297
; PRIOR FILING DATE: 1999-10-18
; PRIOR APPLICATION NUMBER: 09/423741
; PRIOR FILING DATE: 1999-11-10
; PRIOR APPLICATION NUMBER: 09/709238
; PRIOR FILING DATE: 2000-11-08
; PRIOR APPLICATION NUMBER: 09/802706
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: 09/866034
; PRIOR FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: 09/872035
; PRIOR FILING DATE: 2001-06-01
; PRIOR APPLICATION NUMBER: 09/882636
; PRIOR FILING DATE: 2001-06-14
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 09/924419
; PRIOR FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/927796
; PRIOR FILING DATE: 2001-08-06
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; PRIOR FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/941992
; PRIOR FILING DATE: 2001-08-28
; PRIOR APPLICATION NUMBER: 09/946374
; PRIOR FILING DATE: 2001-09-04
; PRIOR APPLICATION NUMBER: PCT/US98/18824
; PRIOR FILING DATE: 1998-09-10
; PRIOR APPLICATION NUMBER: PCT/US99/00106
; PRIOR FILING DATE: 1999-01-05
; PRIOR APPLICATION NUMBER: PCT/US99/05028
; PRIOR FILING DATE: 1999-03-08
; PRIOR APPLICATION NUMBER: PCT/US99/08615
; PRIOR FILING DATE: 1999-04-20
; PRIOR APPLICATION NUMBER: PCT/US99/12252
; PRIOR FILING DATE: 1999-06-02
; PRIOR APPLICATION NUMBER: PCT/US99/20111
; PRIOR FILING DATE: 1999-09-01
; PRIOR APPLICATION NUMBER: PCT/US99/20594
; PRIOR FILING DATE: 1999-09-08
; PRIOR APPLICATION NUMBER: PCT/US99/28313
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: PCT/US99/28551
; PRIOR FILING DATE: 1999-12-02
; PRIOR APPLICATION NUMBER: PCT/US99/28634
; PRIOR FILING DATE: 1999-12-01
; PRIOR APPLICATION NUMBER: PCT/US99/30095
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: PCT/US99/30999
; PRIOR FILING DATE: 1999-12-20
; PRIOR APPLICATION NUMBER: PCT/US00/00376
; PRIOR FILING DATE: 2000-01-06
; PRIOR APPLICATION NUMBER: PCT/US00/03565
; PRIOR FILING DATE: 2000-02-11
; PRIOR APPLICATION NUMBER: PCT/US00/04341
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: PCT/US00/04342
; PRIOR FILING DATE: 2000-02-18
; PRIOR APPLICATION NUMBER: PCT/US00/05841
; PRIOR FILING DATE: 2000-03-02
; PRIOR APPLICATION NUMBER: PCT/US00/06884

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;  PRIOR FILING DATE: 2000-03-15
;  PRIOR APPLICATION NUMBER: PCT/US00/08439
;  PRIOR FILING DATE: 2000-03-30
;  PRIOR APPLICATION NUMBER: PCT/US00/13705
;  PRIOR FILING DATE: 2000-05-17
;  PRIOR APPLICATION NUMBER: PCT/US00/14042
;  PRIOR FILING DATE: 2000-05-22
;  PRIOR APPLICATION NUMBER: PCT/US00/14941
;  PRIOR FILING DATE: 2000-05-30
;  PRIOR APPLICATION NUMBER: PCT/US00/15264
;  PRIOR FILING DATE: 2000-06-02
;  PRIOR APPLICATION NUMBER: PCT/US00/22031
;  PRIOR FILING DATE: 2000-08-11
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/30873
;  PRIOR FILING DATE: 2000-11-10
;  PRIOR APPLICATION NUMBER: PCT/US00/32678
;  PRIOR FILING DATE: 2000-12-01
;  PRIOR APPLICATION NUMBER: PCT/US01/06520
;  PRIOR FILING DATE: 2001-02-28
;  PRIOR APPLICATION NUMBER: PCT/US01/06666
;  PRIOR FILING DATE: 2001-03-01
;  PRIOR APPLICATION NUMBER: PCT/US01/17092
;  PRIOR FILING DATE: 2001-05-25
;  PRIOR APPLICATION NUMBER: PCT/US01/17800
;  PRIOR FILING DATE: 2001-06-01
;  PRIOR APPLICATION NUMBER: PCT/US01/19692
;  PRIOR FILING DATE: 2001-06-20
;  PRIOR APPLICATION NUMBER: PCT/US01/21066
;  PRIOR FILING DATE: 2001-06-29
;  PRIOR APPLICATION NUMBER: PCT/US01/21735
;  PRIOR FILING DATE: 2001-07-09
;  PRIOR APPLICATION NUMBER: PCT/US01/27099
;  PRIOR FILING DATE: 2001-08-29
;  NUMBER OF SEQ ID NOS: 91
; SEQ ID NO 56
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo Sapien
US-10-001-054-56

  Query Match            95.7%;  Score 1170;  DB 13;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 5
US-10-223-085-318
; Sequence 318, Application US/10223085
; Publication No. US20030100497A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C10
;  CURRENT APPLICATION NUMBER: US/10/223,085
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-085-318

  Query Match            95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
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Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
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Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
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Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 6
US-10-223-084-318
; Sequence 318, Application US/10223084
; Publication No. US20030105011A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
```

```
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C5
;  CURRENT APPLICATION NUMBER: US/10/223,084
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-084-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 7
US-10-223-088-318
; Sequence 318, Application US/10223088
; Publication No. US20030105012A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C6
;  CURRENT APPLICATION NUMBER: US/10/223,088
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-088-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 8
US-10-223-090-318
; Sequence 318, Application US/10223090
; Publication No. US20030105013A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
```

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;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C2
;  CURRENT APPLICATION NUMBER: US/10/223,090
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-090-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||         ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 9
US-10-223-087-318
; Sequence 318, Application US/10223087
; Publication No. US20030109438A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C4
;  CURRENT APPLICATION NUMBER: US/10/223,087
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  PRIOR APPLICATION NUMBER: US 60/230,978
;  PRIOR FILING DATE: 2000-09-07
;  PRIOR APPLICATION NUMBER: US 60/232,887
;  PRIOR FILING DATE: 2000-09-15
;  PRIOR APPLICATION NUMBER: US 09/664,610
;  PRIOR FILING DATE: 2000-09-18
;  PRIOR APPLICATION NUMBER: US 09/665,350
;  PRIOR FILING DATE: 2000-09-18
;  PRIOR APPLICATION NUMBER: US 60/242,922
;  PRIOR FILING DATE: 2000-10-24
;  PRIOR APPLICATION NUMBER: US 09/709,238
;  PRIOR FILING DATE: 2000-11-08
;  PRIOR APPLICATION NUMBER: PCT/US00/30952
;  PRIOR FILING DATE: 2000-11-08
;  PRIOR APPLICATION NUMBER: PCT/US00/30873
;  PRIOR FILING DATE: 2000-11-10
;  PRIOR APPLICATION NUMBER: PCT/US00/32678
;  PRIOR FILING DATE: 2000-12-01
;  PRIOR APPLICATION NUMBER: US 09/747,259
;  PRIOR FILING DATE: 2000-12-20
;  PRIOR APPLICATION NUMBER: PCT/US00/34956
;  PRIOR FILING DATE: 2000-12-20
;  PRIOR APPLICATION NUMBER: US 09/767,609
;  PRIOR FILING DATE: 2001-01-22
;  PRIOR APPLICATION NUMBER: US 09/796,498
;  PRIOR FILING DATE: 2001-02-28
;  PRIOR APPLICATION NUMBER: PCT/US01/06520
;  PRIOR FILING DATE: 2001-02-28
;  PRIOR APPLICATION NUMBER: PCT/US01/06666
;  PRIOR FILING DATE: 2001-03-01
;  PRIOR APPLICATION NUMBER: US 09/802,706
;  PRIOR FILING DATE: 2001-03-09
;  PRIOR APPLICATION NUMBER: US 09/808,689
;  PRIOR FILING DATE: 2001-03-14
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;  PRIOR APPLICATION NUMBER: US 09/816,744
;  PRIOR FILING DATE: 2001-03-22
;  PRIOR APPLICATION NUMBER: US 09/828,366
;  PRIOR FILING DATE: 2001-04-05
;  PRIOR APPLICATION NUMBER: US 09/854,208
;  PRIOR FILING DATE: 2001-05-10
;  PRIOR APPLICATION NUMBER: US 09/854,280
;  PRIOR FILING DATE: 2001-05-10
;  PRIOR APPLICATION NUMBER: US 09/866,028
;  PRIOR FILING DATE: 2001-05-25
;  PRIOR APPLICATION NUMBER: US 09/866,034
;  PRIOR FILING DATE: 2001-05-25
;  PRIOR APPLICATION NUMBER: PCT/US01/17092
;  PRIOR FILING DATE: 2001-05-25
;  PRIOR APPLICATION NUMBER: US 09/870,574
;  PRIOR FILING DATE: 2001-05-30
;  PRIOR APPLICATION NUMBER: PCT/US01/17443
;  PRIOR FILING DATE: 2001-05-30
;  PRIOR APPLICATION NUMBER: PCT/US01/17800
;  PRIOR FILING DATE: 2001-06-01
;  PRIOR APPLICATION NUMBER: PCT/US01/19692
;  PRIOR FILING DATE: 2001-06-20
;  PRIOR APPLICATION NUMBER: PCT/US01/21066
;  PRIOR FILING DATE: 2001-06-29
;  PRIOR APPLICATION NUMBER: PCT/US01/21735
;  PRIOR FILING DATE: 2001-07-09
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-087-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 10
US-10-223-083-318
; Sequence 318, Application US/10223083
; Publication No. US20030119112A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C8
;  CURRENT APPLICATION NUMBER: US/10/223,083
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-083-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 11
US-10-223-089-318
; Sequence 318, Application US/10223089
; Publication No. US20030125521A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
```

```
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C9
;  CURRENT APPLICATION NUMBER: US/10/223,089
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-089-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||         |||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 12
US-10-210-951-62
; Sequence 62, Application US/10210951
; Publication No. US20030170228A1
; GENERAL INFORMATION:
;  APPLICANT: Ashkenazi,Avi J.
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Godowski,Paul J.
;  APPLICANT:  Gurney,Austin L.
;  APPLICANT:  Hillan,Kenneth J.
;  APPLICANT:  Marsters,Scot A.
;  APPLICANT:  Pan,James
;  APPLICANT:  Pitti,Robert M.
;  APPLICANT:  Roy,Margaret Ann
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Stone,Donna M.
;  APPLICANT:  Watanabe,Colin K.
;  APPLICANT:  Wood,William I.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TREATMENT OF TUMOR
;  FILE REFERENCE: P2931R1C1
;  CURRENT APPLICATION NUMBER: US/10/210,951
;  CURRENT FILING DATE:  2002-08-02
;  PRIOR APPLICATION NUMBER: 60/014699
;  PRIOR FILING DATE: 1996-04-01
;  PRIOR APPLICATION NUMBER: 60/026943
;  PRIOR FILING DATE: 1996-09-23
;  PRIOR APPLICATION NUMBER: 60/059121
;  PRIOR FILING DATE: 1997-07-17
;  PRIOR APPLICATION NUMBER: 60/059352
;  PRIOR FILING DATE: 1997-09-19
;  PRIOR APPLICATION NUMBER: 60/062037
;  PRIOR FILING DATE: 1997-10-10
;  PRIOR APPLICATION NUMBER: 60/063755
;  PRIOR FILING DATE: 1997-10-17
;  PRIOR APPLICATION NUMBER: 60/063045
;  PRIOR FILING DATE: 1997-10-24
;  PRIOR APPLICATION NUMBER: 60/063046
;  PRIOR FILING DATE: 1997-10-24
;  PRIOR APPLICATION NUMBER: 60/066511
;  PRIOR FILING DATE: 1997-11-24
;  PRIOR APPLICATION NUMBER: 60/066772
;  PRIOR FILING DATE: 1997-11-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 258
; SEQ ID NO 62
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-210-951-62

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||         |||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 13
US-10-211-884-62
; Sequence 62, Application US/10211884
; Publication No. US20030175900A1
; GENERAL INFORMATION:
;  APPLICANT: Ashkenazi,Avi J.
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Godowski,Paul J.
;  APPLICANT:  Gurney,Austin L.
;  APPLICANT:  Hillan,Kenneth J.
;  APPLICANT:  Marsters,Scot A.
;  APPLICANT:  Pan,James
;  APPLICANT:  Pitti,Robert M.
;  APPLICANT:  Roy,Margaret Ann
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Stone,Donna M.
;  APPLICANT:  Watanabe,Colin K.
;  APPLICANT:  Wood,William I.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TREATMENT OF TUMOR
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; FILE REFERENCE: P2931R1C1
; CURRENT APPLICATION NUMBER: US/10/211,884
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/014699
; PRIOR FILING DATE: 1996-04-01
; PRIOR APPLICATION NUMBER: 60/026943
; PRIOR FILING DATE: 1996-09-23
; PRIOR APPLICATION NUMBER: 60/059121
; PRIOR FILING DATE: 1997-07-17
; PRIOR APPLICATION NUMBER: 60/059352
; PRIOR FILING DATE: 1997-09-19
; PRIOR APPLICATION NUMBER: 60/062037
; PRIOR FILING DATE: 1997-10-10
; PRIOR APPLICATION NUMBER: 60/063755
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/063045
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/063046
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/066511
; PRIOR FILING DATE: 1997-11-24
; PRIOR APPLICATION NUMBER: 60/066772
; PRIOR FILING DATE: 1997-11-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 258
; SEQ ID NO 62
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-211-884-62

Query Match 95.7%; Score 1170; DB 14; Length 220;
Best Local Similarity 96.5%; Pred. No. 5.2e-61;
Matches 220; Conservative 0; Mismatches 0; Indels 8; Gaps 1;

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Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 14
US-10-223-081-318
; Sequence 318, Application US/10223081
; Publication No. US20030186866A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Marsters, Scot A.
; APPLICANT: Pan, James
; APPLICANT: Stephan, Jean-Philippe F.
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
; TITLE OF INVENTION: TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
; FILE REFERENCE: P3235P1C7
; CURRENT APPLICATION NUMBER: US/10/223,081
; CURRENT FILING DATE: 2002-08-16
; PRIOR APPLICATION NUMBER: US 10/081,056
; PRIOR FILING DATE: 2002-02-20
; PRIOR APPLICATION NUMBER: US 60/213,637
; PRIOR FILING DATE: 2000-06-23
; PRIOR APPLICATION NUMBER: US 60/219,556
; PRIOR FILING DATE: 2000-07-20
; PRIOR APPLICATION NUMBER: US 60/220,624
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: US 60/220,664
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: PCT/US00/20710
; PRIOR FILING DATE: 2000-07-28
; PRIOR APPLICATION NUMBER: US 60/222,695
; PRIOR FILING DATE: 2000-08-02
; PRIOR APPLICATION NUMBER: US 09/643,657
; PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/23328
; PRIOR FILING DATE: 2000-08-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-223-081-318

Query Match 95.7%; Score 1170; DB 14; Length 220;
Best Local Similarity 96.5%; Pred. No. 5.2e-61;
Matches 220; Conservative 0; Mismatches 0; Indels 8; Gaps 1;

```
Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
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Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 15
US-10-223-082-318
; Sequence 318, Application US/10223082
; Publication No. US20030191059A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Marsters, Scot A.
; APPLICANT: Pan, James
; APPLICANT: Stephan, Jean-Philippe F.
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan

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;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C3
;  CURRENT APPLICATION NUMBER: US/10/223,082
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-082-318

  Query Match             95.7%;  Score 1170;  DB 14;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 5.2e-61;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||||||||||||||||        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


Search completed: March 27, 2005, 16:03:33
Job time : 74.3743 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:31:17 ; Search time 23.9786 Seconds
(without alignments)
914.875 Million cell updates/sec

Title: US-09-357-349D-9
Perfect score: 1222
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 228

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	253.5	20.7	197	2	T47159	hypothetical prote
2	192	15.7	211	2	I49686	glial cell line-de
3	187	15.3	211	2	B37499	glial cell line-de
4	187	15.3	211	2	A37499	glial cell line-de
5	158.5	13.0	436	2	B55452	cartilage-derived
6	147.5	12.1	1460	1	EDBEIF	immediate-early pr
7	142	11.6	575	1	WFBOM	mullerian inhibiti
8	142	11.6	1585	2	T31611	hypothetical prote
9	138	11.3	574	2	F75356	serine/threonine p
10	137.5	11.3	2205	1	MNWVRN	nonstructural poly
11	136.5	11.2	744	2	T35192	probable ABC trans
12	135	11.0	553	1	A42499	mullerian inhibiti
13	134.5	11.0	3530	2	A59266	unconventional myo
14	133.5	10.9	555	1	S20100	mullerian inhibiti
15	132.5	10.8	401	2	A48423	engrailed homeodom
16	132.5	10.8	560	1	WFHUM	mullerian inhibiti
17	131.5	10.8	710	2	D96728	hypothetical prote
18	131	10.7	393	2	JC5614	RNB6 protein - rat
19	131	10.7	666	2	B70803	hypothetical prote
20	131	10.7	772	2	T13078	KIAA0992 protein -
21	130	10.6	550	2	T36746	probable serine/th
22	128	10.5	539	2	T28770	hypothetical prote
23	127.5	10.4	372	2	C39364	GDF-1 embryonic gr
24	127.5	10.4	946	2	S27921	nuclear antigen EB
25	127	10.4	418	2	T15142	hypothetical prote
26	126.5	10.4	298	2	H87533	peptidase, M23/M37
27	126.5	10.4	312	2	A61183	hypothetical prote
28	126	10.3	1446	1	A45344	immediate-early pr
29	125.5	10.3	231	2	I53659	Sm-B protein - mou
30	125.5	10.3	571	2	T43456	hypothetical prote
31	125	10.2	575	2	T11753	mullerian inhibiti
32	124	10.1	502	2	A55197	Wiskott-Aldrich sy
33	124	10.1	846	2	S52418	GTP-binding regula
34	123.5	10.1	214	2	B34503	small nuclear ribo
35	123.5	10.1	240	2	S09377	small nuclear ribo
36	123.5	10.1	392	1	PIHUB6	salivary proline-r
37	123	10.1	222	2	T43500	hypothetical prote
38	123	10.1	358	1	WMBE38	infected cell prot
39	123	10.1	395	2	H75457	hypothetical prote
40	123	10.1	485	2	A33647	sulfated surface g
41	123	10.1	1008	2	T04462	hypothetical prote
42	123	10.1	1069	2	D85383	hypothetical prote
43	122	10.0	775	1	EDBE11	immediate-early pr
44	122	10.0	2274	2	T30258	adenomatous polypo
45	121.5	9.9	658	2	T08153	cysteine proteinas

ALIGNMENTS

RESULT 1
T47159
hypothetical protein DKFZp762B0211.1 - human
C;Species: Homo sapiens (man)
C;Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 09-Jul-2004
C;Accession: T47159
R;Blum, H.; Bauersachs, S.; Mewes, H.W.; Weil, B.; Wiemann, S.
submitted to the Protein Sequence Database, March 2000
A;Reference number: Z24379
A;Accession: T47159
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-197 <AAA>
A;Cross-references: UNIPROT:Q99748; EMBL:AL161995
A;Experimental source: adult melanoma (MeWo cell line); clone DKFZp762B0211
C;Genetics:
A;Note: DKFZp762B0211.1

Query Match 20.7%; Score 253.5; DB 2; Length 197;
Best Local Similarity 35.8%; Pred. No. 2.9e-09;
Matches 78; Conservative 18; Mismatches 75; Indels 47; Gaps 9;

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Qy         16 WPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVL----ASPAG 71
              |  |:   ||      | | |  |  |    :| :    :  |  :| |  :     :|
Db         21 WMCRE---GLLLSHRLGPALVPLHRLPRTLDARIARLAQYRALLQGAPDAMELRELTP-- 75

Qy         72 HLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARA-AGARG 130
                  | :||    || | |                        |||    ||||  |||
Db         76 ---------W-AGR----PPGPRR------------------RAGPRRRRARARLGARP 102

Qy        131 CRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRP 190
              | ||   | |  ||||: ||| | ||:|:|:|  |   :|| |  |     ||     |
Db        103 CGLRELEVRVSELGLGYASDETVLFRYCAGACEAAARVYDLGLRRLRQRRRLR---RERV 159

Qy        191 VSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 227
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Db        160 RAQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECACV 197
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RESULT 2
I49686
glial cell line-derived neuotrophic factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C;Accession: I49686; JC6518
R;Watabe, K.; Fukuda, T.; Tanaka, O.; Honda, H.; Toyohara, K.; Sakai, O.
J. Neurosci. Res. 41, 279-290, 1995
A;Title: Spontaneously immortalized adult mouse Schwann cells secrete autocrine and parac
A;Reference number: I49686; MUID:95379105; PMID:7650763
A;Accession: I49686
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA

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A;Residues: 1-211 <RES>
A;Cross-references: UNIPROT:P48540; GB:D49921; NID:g758584; PIDN:BAA08660.1; PID:g758585
R;Matsushita, N.; Fujita, Y.; Tanaka, M.; Nogatsu, T.; Kiuchi, K.
Gene 203, 149-157, 1997
A;Title: Cloning and structural organization of the gene encoding the mouse glial cell l
A;Reference number: JC6518; MUID:98086214; PMID:9426245
A;Accession: JC6518
A;Status: preliminary
A;Molecule type: nucleic acid
A;Residues: 1-211 <MAT>

  Query Match             15.7%;  Score 192;  DB 2;  Length 211;
  Best Local Similarity   28.8%;  Pred. No. 1.9e-05;
  Matches   64;  Conservative   28;  Mismatches   92;  Indels   38;  Gaps    7;

Qy         31 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPA-GHLPGGRTARWC-SGRARR 88
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Db          3 LWDVVAVCLVLLHTASA---------FPLPAGKRLLEAPAEDHSLGHRRVPFALTSDSNM 53

Qy         89 PPPQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAA 126
              |  |              |   |    :||||  |  :|         | | | :
Db         54 PEDYPDQFDDVMDFIQATIKRLKRSPDKQAAALPRRERNRQAAAASPENSRGKGRRGQRG 113

Qy        127 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPP 186
               ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|  :  |
Db        114 KNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCESAETMYDKILKNLSRSRRLT--- 170

Qy        187 GSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 227
              |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        171 -SDKVGQACCRPVAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211


RESULT 3
B37499
glial cell line-derived neurotrophic factor precursor - human
N;Alternate names: GDNF
C;Species: Homo sapiens (man)
C;Date: 26-Aug-1999 #sequence_revision 26-Aug-1999 #text_change 09-Jul-2004
C;Accession: B37499
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic n
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: B37499
A;Molecule type: DNA
A;Residues: 1-211 <LIN>
A;Cross-references: UNIPROT:P39905; GB:L19063; GB:L15306; NID:g306761; PIDN:AAA67910.1;
A;Note: sequence extracted from NCBI backbone (NCBIP:132084)
C;Keywords: glycoprotein; homodimer
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-77/Domain: propeptide #status predicted <PRO>
F;78-211/Product: glial cell line-derived neurotrophic factor #status predicted <MAT>
F;126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             15.3%;  Score 187;  DB 2;  Length 211;
  Best Local Similarity   28.6%;  Pred. No. 3.9e-05;
  Matches   63;  Conservative   25;  Mismatches   98;  Indels   34;  Gaps    5;

Qy         31 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPP 90
              ||  :|   :|       | :|   | |     ||   :     |     |     |  :  |
Db          3 LWDVVAVCLVL-------LHTASAFPLPAGKRPPEAPAEDRSLGRRRAPFALSSDSNMPE 55

Qy         91 PQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAAGA 128
               |              |     |    : |||  |  :|         | | | :
Db         56 DYPDQFDDVMDFIQATIKRLKRSPDKQMAVLPRRERNRQAAAANPENSRGKGRRGQRGKN 115

Qy        129 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 188
              |||  :  :  |  ||||: : | : ||:|||||  | : :|  | :|     |     |
Db        116 RGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCDAAETTYDKILKNLSRNRRL----VS 171

Qy        189 RPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 227
               | | ||||  : : :||:| |  :  : : ||  |||:
Db        172 DKVGQACCRPIAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211
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```
RESULT 4
A37499
glial cell line-derived neurotrophic factor precursor - rat
N;Alternate names: GDNF
N;Contains: glial cell line-derived neurotrophic factor splice form GDNF555; glial cell l
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Feb-1994 #sequence_revision 16-Feb-1994 #text_change 09-Jul-2004
C;Accession: A37499; I67605; I53427; I58180; S61537
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic ne
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: A37499
A;Molecule type: mRNA; protein
A;Residues: 1-211 <LIN>
A;Cross-references: UNIPROT:Q07731; GB:L15305; NID:g310123; PIDN:AAA67909.1; PID:g310124
A;Experimental source: glial cell line B49
A;Note: sequence extracted from NCBI backbone (NCBIP:132083)
R;Springer, J.E.; Seeburger, J.L.; He, J.; Gabrea, A.; Blankenhorn, E.P.; Bergman, L.W.
Exp. Neurol. 131, 47-52, 1995
A;Title: cDNA sequence and differential mRNA regulation of two forms of glial cell line-c
A;Reference number: I53427; MUID:95203379; PMID:7895811
A;Accession: I67605
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-24,'A',52-76,'S',78-89,'K',91-211 <SPR1>
A;Cross-references: GB:S75585; NID:g912790; PIDN:AAB33892.1; PID:g912791
A;Experimental source: Long-Evan rats; splice form GDNF555
A;Accession: I53427
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-76,'S',78-89,'K',91-211 <SPR2>
A;Cross-references: GB:S75583; NID:g912788; PIDN:AAB33891.1; PID:g912789
A;Experimental source: strain uncertain; splice form GDNF633
R;Suter-Crazzolara, C.; Unsicker, K.
Neuroreport 5, 2486-2488, 1994
A;Title: GDNF is expressed in two forms in many tissues outside the CNS.
A;Reference number: I58180; MUID:95210610; PMID:7696586
A;Accession: I58180
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-24,'A',52-76 <SUT>
A;Cross-references: EMBL:X92495; NID:g1045219; PIDN:CAA63237.1; PID:g1045220
A;Experimental source: strain wistar; kidney
C;Genetics:
A;Gene: gdnf
C;Keywords: disulfide bond; glycoprotein; homodimer
F;1-211/Product: glial cell line-derived neurotrophic factor splice form GDNF633 #status
F;1-24,'A',52-211/Product: glial cell line-derived neurotrophic factor splice form GDNF55
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-77/Domain: propeptide #status predicted <PRO>
F;78-211/Product: glial cell line-derived neurotrophic factor #status experimental <MAT>
F;126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match             15.3%;  Score 187;  DB 2;  Length 211;
  Best Local Similarity   28.4%;  Pred. No. 3.9e-05;
  Matches   63;  Conservative   29;  Mismatches   92;  Indels   38;  Gaps    7;

Qy         31 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPA-GHLPGGRTARWC-SGRARR 88
              ||  :|   :|   | |           |      :| :||  |  | |   :  :  :
Db          3 LWDVVAVCLVLLHTASA---------FPLPAGKRLLEAPAEDHSLGHRRVPFALTSDSNM 53

Qy         89 PPPQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAA 126
              |  |              |   |    :||||  |  :|         | | | :
Db         54 PEDYPDQFDDVMDFIQATIKRLKRSPDKQAAALPRRERNRQAAAASPENSRGKGRRGQRG 113

Qy        127 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPP 186
               ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|  :  |
Db        114 KNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCEAAETMYDKILKNLSRSRRLT--- 170

Qy        187 GSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 227
```

```
                 |  | | ||||  : : :||:| :  :  : : ||  |||:
Db        171 -SDKVGQACCRPVAFDDDLSFLDDSLVYHILRKHSAKRCGCI 211
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RESULT 5
B55452
cartilage-derived morphogenetic protein 2 precursor - bovine (fragment)
C;Species: Bos primigenius taurus (cattle)
C;Date: 10-Feb-1995 #sequence_revision 10-Feb-1995 #text_change 09-Jul-2004
C;Accession: B55452
R;Chang, S.C.; Hoang, B.; Thomas, J.T.; Vukicevic, S.; Luyten, F.P.; Ryba, N.J.P.; Kozak
J. Biol. Chem. 269, 28227-28234, 1994
A;Title: Cartilage-derived morphogenetic proteins. New members of the transforming growt
A;Reference number: A55452; MUID:95050604; PMID:7961761
A;Accession: B55452
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-436 <CHA>
A;Cross-references: UNIPROT:P55106; GB:U13661; NID:g632489; PIDN:AAA61416.1; PID:g632490
C;Superfamily: inhibin

  Query Match 13.0%; Score 158.5; DB 2; Length 436;
  Best Local Similarity 23.2%; Pred. No. 0.004;
  Matches 85; Conservative 16; Mismatches 80; Indels 185; Gaps 17;

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Qy          7 GLSTLSHCPWPR-----------------------RQAPLGLSAQPALWPTLAALAL-- 40
              ||  ||| |  |                       ||||  | | ||  | |||| |
Db        109 GLDDLSHTPLRRQKYLFDVSTLSDKEELVGADVRLFRQAPAAL-APPAAAP-LAALRLPV 166

Qy         41 --LSSVAEASLGSAP---------------------------------------RSPAP 58
                :  ||    ||                                        |:| |
Db        167 APAAGSAEPGPAGAPRPGWEVFDVWRGLRPQPWKQLCLELRAAWGGEPGAAEDEARTPGP 226

Qy         59 REGPPPVLASPAGHLPGGRTARWCSGRA------------------------------ 86
              :: ||| | |    |  ||  |    ||
Db        227 QQPPPPDLRS----LGFGRRVRTPQERALLVVFSRSQRKTLFAEMREQLGSATEVVGPGG 282

Qy         87 ----RRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA--------RGCRLR 134
                   |||      |||| |||  |  |    :  || | | |         :  |||
Db        283 GAEGSGPPP------PPPPPPPSGTPDAG--LWSPSPGRRRRTAFASRHGKRHGKKSRLR 334

Qy        135 SQLVPVRALGLGHRSDELVRFR-----------------FCSGSCRRARSPHDLSLASLL 177
                |:              | |:                | | |        |  | |
Db        335 CSKKPLH-----------VNFKELGWDDWIIAPLEYEAYHCEGVC-------DFPLRS-- 374

Qy        178 GAGALRP-------------PPGSRPVSQPCCRPTRYEAVSFMDV----NSTWRTVDRLS 220
                | |                |||  | |  || ||:   :|. : :    |  :   : :
Db        375 ---HLEPTNHAIIQTLMNSMDPGSTPPS--CCVPTKLTPISILYIDAGNNVVYNEYEEMV 429

Qy        221 ATACGC 226
                :|||
Db        430 VESCGC 435
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RESULT 6
EDBEIF
immediate-early protein IE180 - suid herpesvirus 1 (strain Indiana-Funkhauser)
C;Species: suid herpesvirus 1
C;Date: 30-Jun-1990 #sequence_revision 30-Jun-1990 #text_change 09-Jul-2004
C;Accession: S04713
R;Cheung, A.K.
Nucleic Acids Res. 17, 4637-4646, 1989
A;Title: DNA nucleotide sequence analysis of the immediate-early gene of pseudorabies vi
A;Reference number: S04713; MUID:89315207; PMID:2546124
A;Accession: S04713
A;Molecule type: DNA
A;Residues: 1-1460 <CHE>
A;Cross-references: UNIPROT:P11675
C;Superfamily: herpesvirus immediate-early protein IE175
C;Keywords: DNA binding; early protein; transcription regulation

  Query Match 12.1%; Score 147.5; DB 1; Length 1460;
  Best Local Similarity 27.3%; Pred. No. 0.049;
  Matches 65; Conservative 12; Mismatches 68; Indels 93; Gaps 12;

```
Qy         17 PRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPG- 75
              |   :|:||| :                                  || :    || |     |  ||
Db        116 PAAGSPVGLSIR----------------------APSTVTSSSGPGP------GPAPGP 146

Qy         76 GRTARWCSGRAR---------RPPPQPSRPAPPPPAPPS-ALPRGGRAARAGGP---GSR 122
              ||  |  | | |         ||||||  || |||||||:   |  |  |  ||   |:|
Db        147 GRRPRQHSQRQRPGPPAAPGARPPPQPPRP-PPPPAPPAPPAPPAPRRPRGDGPPRGGTR 205

Qy        123 ARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGAL 182
              :             : | |  ||| |       |       |  :  |       | | |
Db        206 S-------------VSPGRRRGLGPR-------RHQHSQQRWPQRRH--------GGGPL 237

Qy        183 --RPPPGSRPVSQPCCRPTRYEAVSFMDVNST------------------WRTVDRL 219
                |||  |         |   |  : : : ||                  ||   ||
Db        238 PQPPPPPGRSRRPAAAAPPPAEGTAVVTITSTASPWLDEPAAARRLDPAAAWRPEPRL 295
```

RESULT 7
WFBOM
mullerian inhibiting factor precursor - bovine
N;Alternate names: Mullerian inhibiting substance (MIS)
C;Species: Bos primigenius taurus (cattle)
C;Date: 13-Aug-1986 #sequence_revision 13-Aug-1986 #text_change 09-Jul-2004
C;Accession: A01398; B01398
R;Cate, R.L.; Mattaliano, R.J.; Hession, C.; Tizard, R.; Farber, N.M.; Cheung, A.; Ninfa,
an, K.L.; Ragin, R.C.; Manganaro, T.F.; MacLaughlin, D.T.; Donahoe, P.K.
Cell 45, 685-698, 1986
A;Title: Isolation of the bovine and human genes for Muellerian inhibiting substance and
A;Reference number: A90879; MUID:86218082; PMID:3754790
A;Accession: A01398
A;Molecule type: DNA
A;Residues: 1-14 <CA1>
A;Cross-references: UNIPROT:P03972
A;Experimental source: newborn calf testis, clones cbmis15 and pS21
A;Accession: B01398
A;Molecule type: mRNA
A;Residues: 15-575 <CA2>
C;Comment: This glycoprotein, produced by the Sertoli cells of the testis, causes regress
 tissues of Mullerian duct origin. Other roles for this protein in gonadal differentiatic
ter duct regression and in the adult ovary.
C;Comment: This protein is homologous to the beta transforming growth factor, inhibin alp
these sequences. All of these proteins are biologically active as disulfide-linked dimers
C;Comment: Although it does not compete with EGF for receptor binding sites, MIS can inhi
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-24/Domain: propeptide #status predicted <PRO>
F;25-575/Product: mullerian inhibiting factor #status predicted <MAT>
F;78,344/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match 11.6%; Score 142; DB 1; Length 575;
  Best Local Similarity 24.9%; Pred. No. 0.052;
  Matches 77; Conservative 25; Mismatches 91; Indels 116; Gaps 17;

```
Qy         15 PWPR-RQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPR-------------- 59
              |:|: | :|    | |:  | |  |  |     |  |   |:  ||
Db        285 PFPQPRASPEPEEAPPSADPFLETLTRL---VRALAGPPARASPPRLALDPGALAGFPQG 341

Qy         60 -------------EGPPPVL-------------ASPAGHLPGGRTARWCSGRARRPPPQ 92
                           :|  |:|             |:|     | ::  | :| |||   :
Db        342 QVNLSDPAALERLLDGEEPLLLLLPPTAATTGVPATP----QGPKSPLWAAGLARRVAAE 397

Qy         93 --------PSRPAPPPPAPPSALPR-----GGRAARAGGP-----------GSRA----- 123
                     : |  || |||  | |       |     |||            | ||
Db        398 LQAVAAELRALPGLPPAAPP-LLARLLALCPGNPDSPGGPLRALLLLKALQGLRAEWRGR 456

Qy        124 ---------RAAGARG----CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RR 164
                    |:|||     | ||   | :||      ||    |  :   | |:|   :
Db        457 ERSGSARAQRSAGAAAADGPCALRELSVDLRA----ERSVLIPETYQANNCQGACGWPQS 512

Qy        165 ARSP----HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVD 217
```

```
Db        513 DRNPRYGNHVVLLLKMQARGATLARP-------PCCVPTAYTGKLLISLSEERISAHHVP 565

Qy        218 RLSATACGC 226
Db        566 NMVATECGC 574
```

RESULT 8
T31611
hypothetical protein Y50E8A.g - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 29-Oct-1999
C;Accession: T31611
R;Steward, C.
submitted to the EMBL Data Library, September 1999
A;Reference number: Z21047
A;Accession: T31611
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-1585 <WIL>
A;Cross-references: EMBL:AL117200; NID:e1549770; PIDN:CAB55050.1; CESP:Y50E8A.g
A;Experimental source: clone Y50E8A
C;Genetics:
A;Gene: CESP:Y50E8A.g
A;Introns: 25/3; 60/1; 133/2; 217/3; 270/3; 337/2; 400/1; 746/2

  Query Match 11.6%; Score 142; DB 2; Length 1585;
  Best Local Similarity 30.5%; Pred. No. 0.11;
  Matches 51; Conservative 15; Mismatches 59; Indels 42; Gaps 6;

```
Qy          6 GGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLG-----------SAP 53
Db       1424 GGYSGGSAAPPPPPPAP-----APAPAPSSGGYSGGSSGGSAAGGGGGSSGGYTGGSAAP 1478

Qy         54 RSPAPREGPPPVLASPA------GHL----------PGGRTARWCSGRARRPPPQPSRPA 97
Db       1479 PPPPPPPPPPPPAPAPAPAPSSGGYSGGSSGGSAAGGGGGSSGGYTGGSAAPPPPPPPPP 1538

Qy         98 PPPPAP-PSALP--------RGGRAARAGGPGSRARAAGARGCRLRS 135
Db       1539 PPPPAPAPAPAPSSGGYSGGSSGGSAAGGGGGSSGGYSGSRFARHRA 1585
```

RESULT 9
F75356
serine/threonine protein kinase-related protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: F75356
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, R.J.;
, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, C.; Ma
S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans R1.
A;Reference number: A75250; MUID:20036896; PMID:10567266
A;Accession: F75356
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-574 <WHI>
A;Cross-references: UNIPROT:Q9RTJ3; GB:AE002018; GB:AE000513; NID:g6459537; PIDN:AAF1132
A;Experimental source: strain R1
C;Genetics:
A;Gene: DR1769
A;Map position: 1

  Query Match 11.3%; Score 138; DB 2; Length 574;
  Best Local Similarity 29.4%; Pred. No. 0.092;
  Matches 55; Conservative 13; Mismatches 55; Indels 64; Gaps 10;

```
Qy          8 LSTLSHCPWPR-RQAPLGLSAQPALWPTLAALALLS-------SVAEASLGSAPRSPAPR 59
Db        372 LRPLATGPWPTFRASPLG-------WGRSATAAELTAQTQARQAAAAASTSQQPRLPTLA 424

Qy         60 EGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPA-PPPPAPPSALPRG-------- 110
Db        425 QAPAPTPA-PAQTTP------------RPQPTPAQPATPAAPVPPVASPAPATARLTPQ 470

Qy        111 ----------------GRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELV 153
Db        471 VIGGVIYLPLSPIAAGLGYQVQAGSPTRALLVAGSQ--RL---TVPVRAVG----GQSLI 521

Qy        154 RFRFCSG 160
Db        522 ALRFVTG 528
```

RESULT 10
MNWVRN
nonstructural polyprotein - rubella virus (strain Therien)
N;Contains: nonstructural protein NS1; nonstructural protein NS2; nonstructural protein N
C;Species: rubella virus
C;Date: 30-Sep-1989 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
C;Accession: A35320; A29811
R;Dominguez, G.; Wang, C.Y.; Frey, T.K.
Virology 177, 225-238, 1990
A;Title: Sequence of the genome RNA of rubella virus: evidence for genetic rearrangement
A;Reference number: A35320; MUID:90281585; PMID:2353453
A;Accession: A35320
A;Molecule type: genomic RNA
A;Residues: 1-2205 <DOM>
A;Cross-references: UNIPROT:P13889; GB:M15240; NID:g333971; PIDN:AAA88528.1; PID:g333972
R;Frey, T.K.; Marr, L.D.
Gene 62, 85-99, 1988
A;Title: Sequence of the region coding for virion proteins C and E2 and the carboxy termi
A;Reference number: A29811; MUID:88226020; PMID:2836271
A;Accession: A29811
A;Molecule type: genomic RNA
A;Residues: 1737-2205 <FRE>
A;Cross-references: GB:M15240
C;Comment: The cleavage sites of this polyprotein have not been determined.
C;Superfamily: rubella virus nonstructural polyprotein
C;Keywords: nonstructural protein

  Query Match 11.3%; Score 137.5; DB 1; Length 2205;
  Best Local Similarity 27.9%; Pred. No. 0.28;
  Matches 61; Conservative 17; Mismatches 70; Indels 71; Gaps 13;

```
Qy         14 CPWPRRQAPLGLSAQPALW---------PTLAALALL---------------------- 41
Db        647 CAWAQR-----LLGEPAVMHLPYTDGDVPQLIALALRTLAQQGAALALSVRDLPGGAAFD 701

Qy         42 SSVAEASLGSAPR-----SPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRP 96
Db        702 ANAVTAAVRAGPRQSAAASPPPGDPPPPRRAR--------RSQRHSDARG-TPPPAPARD 752

Qy         97 APPPPAP-PSALPRGGRAAR--AGGPGSRARAAGAR-GCRLRSQLVPVRALGLGHRSDEL 152
Db        753 -PPPPAPSPPAPPRAGDPVPPIPAGPADRARDAELEVACEPSGPPTSTRA----DPDSDI 807

Qy        153 VRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPV 191
Db        808 VE------SYARAAGPVHLRVRDIMD-----PPPGCKVV 835
```

RESULT 11
T35192
probable ABC transporter - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
C;Accession: T35192
R;Seeger, K.; Harris, D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
submitted to the EMBL Data Library, April 1998
A;Reference number: Z21571
A;Accession: T35192
A;Status: preliminary; translated from GB/EMBL/DDBJ

```
A;Molecule type: DNA
A;Residues: 1-744 <SEE>
A;Cross-references: UNIPROT:O69995; EMBL:AL022374; PIDN:CAA18516.1; GSPDB:GN00070; SCOED
A;Experimental source: strain A3(2)
C;Genetics:
A;Gene: SCOEDB:SC5B8.08

  Query Match             11.2%;  Score 136.5;  DB 2;  Length 744;
  Best Local Similarity   31.8%;  Pred. No. 0.14;
  Matches   68;  Conservative   16;  Mismatches   85;  Indels   45;  Gaps   11;

Qy          4 GLGGLSTLSHCPWPRRQAPLGLSAQ-PALWPTLAALALLSSVAEASLGSAPRSPAPREGP 62
              |   ::  :  | | ||||  :|   |   |: :| |       :   | | :|||  ||
Db        356 GPASVAVPNRTPGP-RQAPAPVSGHGPEAAPSPSAPA----PGPSEPASGPSAPAP--GP 408

Qy         63 PPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP---PSALP----RGGRAAR 115
              |   | |:   ||       :|    | | || ||  | ||   ||||     |  |  |
Db        409 PAPAAGPSAPAPGPSAP---AGGPSAPAPGPSEPASGPSAPAPGPSALDAEPLRTPRPFR 465

Qy        116 AGGPGS-RARAAGAR---GCRLRSQLVPVRALGLGHRSDELVRFRFCSGS---------- 161
              |  ||| | | | |       :||   |:| |     |    ||  | :|:
Db        466 ALVPGSARTREATATLPPPISVRSAPSPLRPLRYELRRAVGVRTGFVTGAVVLLVSAVVA 525

Qy        162 ---CRRARSPHDLSLA----------SLLGAGAL 182
                 :|    |.|           : |||| |
Db        526 VVLARVGHTPQPRLLAAWPRELPLPPAALGAGLL 559


RESULT 12
A42499
mullerian inhibiting factor precursor - rat
N;Alternate names: anti-mullerian hormone; mullerian inhibiting substance (MIS)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: A42499
R;Haqq, C.; Lee, M.M.; Tizard, R.; Wysk, M.; DeMarinis, J.; Donahoe, P.K.; Cate, R.L.
Genomics 12, 665-669, 1992
A;Title: Isolation of the rat gene for Mullerian inhibiting substance.
A;Reference number: A42499; MUID:92241861; PMID:1572639
A;Accession: A42499
A;Molecule type: DNA
A;Residues: 1-553 <HAQ>
A;Cross-references: UNIPROT:P49000; GB:S98336; NID:g248896; PIDN:AAB22104.1; PID:g248897
A;Note: sequence extracted from NCBI backbone (NCBIN:98336, NCBIP:98343)
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis

  Query Match             11.0%;  Score 135;  DB 1;  Length 553;
  Best Local Similarity   25.4%;  Pred. No. 0.14;
  Matches   61;  Conservative   21;  Mismatches   78;  Indels   80;  Gaps   12;

Qy         38 LALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQ----- 92
              | || | | |::|    |  :|   |                | :| |||    :
Db        342 LLLLLSPAAATVGEPMRLHSPTSAP-----------------WAAGLARRVAVELQAAA 383

Qy         93 ---PSRPAPPPPAPP------SALPRGGRAA---------------------RAG-GPG 120
                 |  || |||       :  |   |:|                       | | |
Db        384 SELRDLPGLPPTAPPLLSRLLALCPNDSRSAGDPLRALLLLKALQGLRAEWRGREGRGRA 443

Qy        121 SRARAAGARG-CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RRARSP----H 169
               |::  |  | | ||   | :||     ||    |  :   | |:|   :  |:|    |
Db        444 GRSKGTGTDGLCALRELSVDLRA----ERSVLIPETYQANNCQGACAWPQSDRNPRYGNH 499

Qy        170 DLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVDRLSATACGC 226
               : |  :   ||            ||| || |     :|  : : :   |  : || |||
Db        500 VVLLLKMQARGAALG-------RLPCCVPTAYTGKLLISLSEEHISAHHVPNMVATECGC 552


RESULT 13
A59266
unconventional myosin-15 - human
C;Species: Homo sapiens (man)
C;Date: 02-Jun-2000 #sequence_revision 02-Jun-2000 #text_change 09-Jul-2004
C;Accession: A59266
R;Liang, Y.; Wang, A.; Belyantseva, I.A.; Anderson, D.W.; Probst, F.J.; Barber, T.D.; Mil
an, T.B.; Fridell, R.A.
Genomics 61, 243-258, 1999
A;Title: Characterization of the human and mouse unconventional myosin XV genes responsib
A;Reference number: A59266; MUID:20021762; PMID:10552926
A;Accession: A59266
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-3530 <LIA>
A;Cross-references: UNIPROT:Q9UKN7; GB:AF144094; NID:g6224682; PIDN:AAF05903.1; PID:g6224
F;1225-1887/Domain: myosin motor domain homology <MMO>

  Query Match             11.0%;  Score 134.5;  DB 2;  Length 3530;
  Best Local Similarity   32.7%;  Pred. No. 0.63;
  Matches   85;  Conservative   12;  Mismatches   78;  Indels   85;  Gaps   20;

Qy         10 TLSHC------PWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAP----R 59
              ||||       | | |     |    | | | |: |               ||  :|    |
Db        653 TLSHWSALLSPPVPPRPPSSGPPPAPPLSPALSGL--------------PRPASPYGSLR 698

Qy         60 EGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPP----PAP-PSALPRGGRAA 114
                |||  |:|| |:|    |   || |   ||  |   ||      | | ||      | |
Db        699 RHPPP-WAAPA-HVP---PAPQASGWAFVEPPAVSPEVPPDLLAFPGPRPSFRGSRRRGA 753

Qy        115 RAGGPGSRARAAGARG-CRLRSQLVPVRAL-GLGHRSDELVRFRFCSG--------SCRR 164
                | ||:  ||:  |    | |    :|:  |||           :||         | |
Db        754 AFGFPGASPRASRRRAWSPLASPQPSLRSSPGLG----------YCSPLAPPSPQLSLRT 803

Qy        165 ----------ARSPHDL--SLASLLGAGALRPP----PGS-RPVSQP---CCRPTRYEAV 204
                       || |  |  | | |    || | ||    ||| || | |   |  | |
Db        804 GPFQPPFLPPARRPRSLQESPAPRRAAGRLGPPGSPLPGSPRPPSPPLGLCHSPRR---- 859

Qy        205 SFMDVNS----TWRTVDRLS 220
              | ::: |    |||   |||
Db        860 SSLNLPSRLPHTWR---RLS 876


RESULT 14
S20100
mullerian inhibiting factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: S20100; S51159
R;Muensterberg, A.; Lovell-Badge, R.
Development 113, 613-624, 1991
A;Title: Expression of the mouse anti-Muellerian hormone gene suggests a role in both mal
A;Reference number: S20100; MUID:92146272; PMID:1782869
A;Accession: S20100
A;Molecule type: DNA
A;Residues: 1-555 <MUE>
A;Cross-references: UNIPROT:P27106; EMBL:X63240; NID:g49945; PIDN:CAA44912.1; PID:g49946
R;Dresser, D.W.; Hacker, A.; Lovell-Badge, R.; Guerrier, D.
submitted to the EMBL Data Library, January 1995
A;Description: The genes for anti-Muellerian hormone (AMH) and a spliceosome protein (SAP
A;Reference number: S51159
A;Accession: S51159
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-41 <DRE>
A;Cross-references: EMBL:X83733
C;Genetics:
A;Introns: 135/1; 182/3; 219/1; 272/2
C;Superfamily: inhibin

  Query Match             10.9%;  Score 133.5;  DB 1;  Length 555;
  Best Local Similarity   25.6%;  Pred. No. 0.17;
  Matches   80;  Conservative   23;  Mismatches  100;  Indels  109;  Gaps   18;

Qy          6 GGLSTLSHCPWPRRQAPLGLSAQPALWP--------TLAAL--ALLSSVAEAS------- 48
              | | |:   |:|:     ||| :|   |         ||  |  ||   : :||
Db        261 GQLDTM---PFPQP----GLSLEPEALPHSADPFLETLTRLVRALRGPLTQASNTQLALD 313
```

```
Qy          49 ---LGSAPR------SPAPR------EGPPPVLASPAG-------HLPGGRTARWCSGRA 86
               | | |:       ||       | |  :| ||          | |  :| | :|
Db         314 PGALASFPQGLVNLSDPAALGRLLDWEEPLLLLLSPTAATEREPIRLHGPASAPWAAGLQ 373

Qy          87 RRPPPQ--------PSRPAPPPPAPP------SALPRGGRA-----------------A 114
               ||   :            |  || |||      :  |   |:                 |
Db         374 RRVAVELQAAASELRDLPGLPPTAPPLLARLLALCPNDSRSSGDPLRALLLLKALQGLRA 433

Qy         115 RAGGPGSRARAAGARG-------CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSCR- 163
               |   | |    ||       | ||   | :||     ||    |  :   | |:||
Db         434 EWHGREGRGRTRAQRGDKGQDGPCALRELSVDLRA----ERSVLIPETYQANNCQGACRW 489

Qy         164 --RARSP----HDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWR 214
                 |:|    | : |  :   ||            ||| || |     :|  :   :
Db         490 PQSDRNPRYGNHVVLLLKMQARGAALG-------RLPCCVPTAYAGKLLISLSEERISAD 542

Qy         215 TVDRLSATACGC 226
               |  : || |||
Db         543 HVPNMVATECGC 554
```

RESULT 15
A48423
engrailed homeodomain-containing protein En-1 - mouse
N;Alternate names: homeotic protein En-1
C;Species: Mus musculus (house mouse)
C;Date: 01-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 09-Jul-2004
C;Accession: A48423; S13009; A26629; A24778
R;Logan, C.; Hanks, M.C.; Noble-Topham, S.; Nallainathan, D.; Provart, N.J.; Joyner, A.L
Dev. Genet. 13, 345-358, 1992
A;Title: Cloning and sequence comparison of the mouse, human, and chicken engrailed gene
A;Reference number: A48423; MUID:93185339; PMID:1363401
A;Accession: A48423
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-401 <LOG>
A;Cross-references: UNIPROT:P09065
A;Experimental source: CD-1, embryo
A;Note: sequence extracted from NCBI backbone (NCBIP:126620)
R;Holland, P.W.H.; Williams, N.A.
FEBS Lett. 277, 250-252, 1990
A;Title: Conservation of engrailed-like homeobox sequences during vertebrate evolution.
A;Reference number: S13009; MUID:91099509; PMID:1980115
A;Accession: S13009
A;Status: preliminary
A;Molecule type: nucleic acid
A;Residues: 321-380 <HOL>
R;Joyner, A.L.; Martin, G.R.
Genes Dev. 1, 29-38, 1987
A;Title: En-1 and En-2, two mouse genes with sequence homology to the Drosophila engrail
A;Reference number: A91620; MUID:88112776; PMID:2892757
A;Accession: A26629
A;Molecule type: DNA; mRNA
A;Residues: 278-401 <JOY>
A;Cross-references: GB:Y00201; GB:M11987; NID:g49587; PIDN:CAA68361.1; PID:g669105
R;Joyner, A.L.; Kornberg, T.; Coleman, K.G.; Cox, D.R.; Martin, G.R.
Cell 43, 29-37, 1985
A;Title: Expression during embryogenesis of a mouse gene with sequence homology to the D
A;Reference number: A24778; MUID:86079501; PMID:2416459
A;Accession: A24778
A;Molecule type: DNA
A;Residues: 311-401 <JO2>
C;Genetics:
A;Gene: en.1
A;Map position: 1
C;Superfamily: unassigned homeobox proteins; homeobox homology
C;Keywords: DNA binding; homeobox; nucleus; transcription regulation
F;313-369/Domain: homeobox homology <HOX>

Query Match 10.8%; Score 132.5; DB 2; Length 401;
Best Local Similarity 30.8%; Pred. No. 0.15;
Matches 64; Conservative 9; Mismatches 86; Indels 49; Gaps 10;

```
Qy          15 PWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLG----SAPRSPAPREGPPPV--LAS 68
               | |: |   || |  |  |:  :|: ||  |  | |    | | || |    ||
Db           6 PEPKSQRDSGLGAVAAAAPSGLSLS-LSPGASGSSGSDGDSVPVSPQPAPPSPPAAPCLP 64

Qy          69 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 128
               | | |                 || |  | |||| ||  |     || |  |   |:
Db          65 PLAHHP-------------HLPPHPPPPPPPPPPPQHL-----AAPAHQPQPAAQLHRT 106

Qy         129 R------------GCR----LRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSP-HDL 171
                           ||:    |   ||   | | |  :    |      |      | | | |
Db         107 TNFFIDNILRPDFGCKKEQPLPQLLVASAAAGGGAAAGGGSRVERDRGQTGAGRDPVHSL 166

Qy         172 -----SLASLLGA--GALRPPPGSRPVS 192
                    |||| |      || ||:| :
Db         167 GTRASGAASLLCAPDANCGPPDGSQPAT 194
```

Search completed: March 27, 2005, 15:45:04
Job time : 25.3119 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:18:47 ; Search time 89.0053 Seconds
(without alignments)
1311.764 Million cell updates/sec

Title: US-09-357-349D-9
Perfect score: 1222
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 228

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1218	99.7	228	2	Q6P6A3	Q6p6a3 homo sapien
2	1170	95.7	220	2	O96030	O96030 homo sapien
3	1110	90.8	237	2	O95441	O95441 homo sapien
4	871	71.3	224	2	Q6AYE8	Q6aye8 rattus norv
5	850	69.6	224	2	Q9Z0L2	Q9z0l2 m neurotrop
6	528	43.2	157	2	Q810F7	Q810f7 rattus norv
7	502	41.1	125	2	Q9QZG3	Q9qzg3 rattus norv
8	253.5	20.7	197	1	NRTN_HUMAN	Q99748 homo sapien
9	244	20.0	156	1	PSPN_HUMAN	O60542 homo sapien
10	242	19.8	195	2	Q811Q5	Q811q5 rattus norv
11	237	19.4	195	1	NRTN_MOUSE	P97463 mus musculu
12	232.5	19.0	156	1	PSPN_MOUSE	O70300 mus musculu
13	222	18.2	156	1	PSPN_RAT	O70301 rattus norv
14	221	18.1	41	2	Q810F6	Q810f6 rattus norv
15	200	16.4	240	2	Q6LEL9	Q6lel9 mus musculu
16	192	15.7	211	1	GDNF_MOUSE	P48540 mus musculu
17	190.5	15.6	161	2	Q9QZG0	Q9qzg0 rattus norv
18	187.5	15.3	143	2	Q8MJ77	Q8mj77 ailuropoda
19	187	15.3	211	1	GDNF_HUMAN	P39905 homo sapien
20	187	15.3	211	1	GDNF_RAT	Q07731 rattus norv
21	185.5	15.2	215	2	Q9IAM3	Q9iam3 gallus gall
22	181.5	14.9	160	2	O97685	O97685 macaca mula
23	178.5	14.6	133	2	Q9UD32	Q9ud32 homo sapien
24	175	14.3	235	2	Q98TU0	Q98tu0 brachydanio
25	165.5	13.5	633	2	Q7PRT7	Q7prt7 anopheles g
26	164	13.4	550	2	Q6SPE9	Q6spe9 oryctolagus
27	160.5	13.1	538	2	Q6SPF0	Q6spf0 homo sapien
28	158.5	13.0	199	2	Q8R485	Q8r485 rattus norv
29	158.5	13.0	436	1	GDF6_BOVIN	P55106 bos taurus
30	157.5	12.9	134	2	Q804C2	Q804c2 nipponia ni
31	157.5	12.9	143	2	Q8QGE9	Q8qge9 nipponia ni
32	154	12.6	3204	2	Q6X248	Q6x248 bovine herp
33	153	12.5	182	2	Q9IAM2	Q9iam2 gallus gall
34	152	12.4	121	2	Q6TYB7	Q6tyb7 bos taurus
35	151.5	12.4	906	2	Q6MWG9	Q6mwg9 oryza sativ
36	147.5	12.1	512	2	Q9LH25	Q9lh25 oryza sativ
37	147.5	12.1	2017	2	Q7XF52	Q7xf52 oryza sativ
38	147.5	12.1	2017	2	Q9AYB6	Q9ayb6 oryza sativ
39	145.5	11.9	2322	2	Q6UDW6	Q6udw6 plasmodium
40	145.5	11.9	3247	2	Q65553	Q65553 bovine herp
41	145.5	11.9	3247	2	Q77CD4	Q77cd4 bovine herp
42	145	11.9	367	2	Q7XF40	Q7xf40 oryza sativ
43	145	11.9	367	2	Q9AYC9	Q9ayc9 oryza sativ
44	144.5	11.8	216	2	Q62LP5	Q62lp5 burkholderi
45	144	11.8	292	2	Q7M5T5	Q7m5t5 porcine ade

ALIGNMENTS

RESULT 1
Q6P6A3
ID Q6P6A3 PRELIMINARY; PRT; 228 AA.
AC Q6P6A3;
DT 05-JUL-2004 (TrEMBLrel. 27, Created)
DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE Neurotrophic factor artemin, isoform 3,.
GN Name=ARTN;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA Jones S.J., Marra M.A.;
RT "Generation and initial analysis of more than 15,000 full-length human
RT and mouse cDNA sequences.";
RL Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RA Strausberg R.;
RL Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
CC -!- SIMILARITY: Belongs to the TGF-beta family.
DR EMBL; BC062375; AAH62375.1; -.
DR HSSP; Q07731; 1AGQ.
DR GO; GO:0008083; F:growth factor activity; IEA.
DR InterPro; IPR002400; GF_cysknot.
DR InterPro; IPR001839; TGFb.
DR Pfam; PF00019; TGF_beta; 1.
DR PRINTS; PR00438; GFCYSKNOT.
DR ProDom; PD000357; TGFb; 1.
DR SMART; SM00204; TGFB; 1.
KW Growth factor.
SQ SEQUENCE 228 AA; 23616 MW; 568BFD09EE05D0FC CRC64;

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  Query Match             99.7%;  Score 1218;  DB 2;  Length 228;
  Best Local Similarity   99.6%;  Pred. No. 4.9e-59;
  Matches  227;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||:||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRQQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228


RESULT 2
O96030
ID   O96030      PRELIMINARY;      PRT;   220 AA.
AC   O96030;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Neurotrophic factor artemin (Pre-pro-neublastin) (Pre-pro-enovin
DE   precursor).
GN   Name=EVN; Synonyms=ARTN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RX   MEDLINE=20139608; PubMed=10673327; DOI=10.1006/mcne.1999.0817;
RA   Rosenblad C., Gronborg M., Hansen C., Blom N., Meyer M., Johansen J.,
RA   Dago L., Kirik D., Patel U.A., Lundberg C., Trono D., Bjorklund A.,
RA   Johansen T.E.;
RT   "In vivo protection of nigral dopamine neurons by lentiviral gene
RT   transfer of the novel GDNF-family member neublastin/artemin.";
RL   Mol. Cell. Neurosci. 15:199-214(2000).
RN   [3]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=20050601; PubMed=10583383;
RA   Masure S., Geerts H., Cik M., Hoefnagel E., Van Den Kieboom G.,
RA   Tuytelaars A., Harris S., Lesage A.S., Leysen J.E., van der Helm L.,
RA   Verhasselt P., Yon J., Gordon R.D.;
RT   "Enovin, a member of the glial cell-line-derived neurotrophic factor
RT   (GDNF) family with growth promoting activity on neuronal cells.
RT   Existence and tissue-specific expression of different splice
RT   variants.";
RL   Eur. J. Biochem. 266:892-902(1999).
RN   [4]
RP   SEQUENCE FROM N.A.
RA   Masure S.L.;
RL   Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF115765; AAD13109.1; -.
DR   EMBL; AF120274; AAD21075.1; -.
DR   EMBL; AJ245628; CAB52396.1; -.
DR   EMBL; AF109401; AAC98690.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0007405; P:neuroblast proliferation; TAS.
DR   GO; GO:0007165; P:signal transduction; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor; Signal.
FT   SIGNAL        1     39       Potential.
FT   CHAIN       108    220       Enovin.
SQ   SEQUENCE   220 AA;  22906 MW;  C47754B19AADCFBB CRC64;

  Query Match             95.7%;  Score 1170;  DB 2;  Length 220;
  Best Local Similarity   96.5%;  Pred. No. 1.9e-56;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||||||||||||||        ||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112

Qy        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172

Qy        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||||||||||||||||||||||
Db        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 3
O95441
ID   O95441      PRELIMINARY;      PRT;   237 AA.
AC   O95441;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF115765; AAD13110.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:727; ARTN.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
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SQ   SEQUENCE   237 AA;  24471 MW;  11C64C4B510CE3AB CRC64;

  Query Match             90.8%;  Score 1110;  DB 2;  Length 237;
  Best Local Similarity   99.5%;  Pred. No. 3.6e-53;
  Matches  208;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         20 QAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 79
              :|||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         29 EAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 88

Qy         80 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVP 139
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         89 RWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVP 148

Qy        140 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        149 VRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPT 208

Qy        200 RYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||||||||||||||||||||||||||||
Db        209 RYEAVSFMDVNSTWRTVDRLSATACGCLG 237


RESULT 4
Q6AYE8
ID   Q6AYE8      PRELIMINARY;      PRT;   224 AA.
AC   Q6AYE8;
DT   25-OCT-2004 (TrEMBLrel. 28, Created)
DT   25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Hypothetical protein.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RX   PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Director MGC Project;
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; BC079078; AAH79078.1; -.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor; Hypothetical protein.
SQ   SEQUENCE   224 AA;  23656 MW;  08907D743F651495 CRC64;

  Query Match             71.3%;  Score 871;  DB 2;  Length 224;
  Best Local Similarity   75.4%;  Pred. No. 3.1e-40;
  Matches  175;  Conservative    6;  Mismatches   39;  Indels   12;  Gaps    2;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||  : ||||  ||         ||||||||||||||||  ||||    |||| |:
Db          1 MELGLGEPTALSHCLRPR--------WQPALWPTLAALALLSSVTEASLDPMSRSPASRD 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARA 116
                | |||| |  :|||| ||  || || |||||  :|||||| |    | |  || |||||
Db         53 VPSPVLAPPTDYLPGGHTAHLCSERALRPPPQSPQPAPPPPGPALQSPPAALRGARAARA 112

Qy        117 GGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASL 176
              |   |||||  |||||||||||||| |||||| |||||:|||||||||||||||||||||||
Db        113 GTRSSRARATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSPHDLSLASL 172

Qy        177 LGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              | ||||| ||||||:|||||||||||||||||||||||||| ||||||||||
Db        173 LDAGALRSPPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 5
Q9Z0L2
ID   Q9Z0L2      PRELIMINARY;      PRT;   224 AA.
AC   Q9Z0L2;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Neurotrophic factor artemin (Mus musculus adult male testis cDNA,
DE   RIKEN full-length enriched library, clone:4930445K15 product:artemin,
DE   full insert sequence) (Mus musculus 2 days pregnant adult female
DE   oviduct cDNA, RIKEN full-length enriched library, clone:E230001A22
DE   product:artemin, full insert sequence).
GN   Name=Artn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
RA   Carninci P., Hayashizaki Y.;
RT   "High-efficiency full-length cDNA cloning.";
RL   Meth. Enzymol. 303:19-44(1999).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
RA   RIKEN FANTOM Consortium;
RT   "Functional annotation of a full-length mouse cDNA collection.";
RL   Nature 409:685-690(2001).
RN   [4]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RA   The FANTOM Consortium,
RA   the RIKEN Genome Exploration Research Group Phase I & II Team;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
RN   [5]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
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RA   Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
RA   Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
RT   "Normalization and subtraction of cap-trapper-selected cDNAs to
RT   prepare full-length cDNA libraries for rapid discovery of new genes.";
RL   Genome Res. 10:1617-1630(2000).
RN   [6]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
RA   Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
RA   Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
RA   Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
RA   Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
RA   Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
RA   Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
RA   Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RT   "RIKEN integrated sequence analysis (RISA) system-384-format
RT   sequencing pipeline with 384 multicapillary sequencer.";
RL   Genome Res. 10:1757-1771(2000).
RN   [7]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Testis;
RA   Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
RA   Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA   Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
RA   Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
RA   Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
RA   Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
RA   Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
RA   Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
RA   Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA   Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RA   Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
RN   [8]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct;
RA   Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
RA   Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
RA   Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
RA   Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
RA   Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
RA   Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
RA   Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
RA   Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
RA   Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
RA   Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
RA   Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF109402; AAC98691.1; -.
DR   EMBL; AK015393; BAB29827.1; -.
DR   EMBL; AK053914; BAC35590.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:1333791; Artn.
DR   GO; GO:0005615; C:extracellular space; IDA.
DR   GO; GO:0005515; F:protein binding; IPI.
DR   GO; GO:0005102; F:receptor binding; IPI.
DR   GO; GO:0007411; P:axon guidance; IDA.
DR   GO; GO:0050930; P:induction of positive chemotaxis; IDA.
DR   GO; GO:0007422; P:peripheral nervous system development; IMP.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
FT   CHAIN       112    224       neurotrophic factor artemin.
SQ   SEQUENCE   224 AA;  23726 MW;  3328FB794581DF0B CRC64;

  Query Match            69.6%;  Score 850;  DB 2;  Length 224;
  Best Local Similarity   73.3%;  Pred. No. 4.3e-39;
  Matches  170;  Conservative    6;  Mismatches   44;  Indels   12;  Gaps    2;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              |||||   : ||||  || |:        | ||||| ||||| | ||||    |||| |:
Db          1 MELGLAEPTALSHCLRPRWQS--------AWWPTLAVLALLSCVTEASLDPMSRSPAARD 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARA 116
              || |||| |  ||||| ||  || |  |||||  :|||||| |     | |  || |||||
Db         53 GPSPVLAPPTDHLPGGHTAHLCSERTLRPPPQSPQPAPPPPGPALQSPPAALRGARAARA 112

Qy        117 GGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASL 176
              |   ||||   |||||||||||| |||||| ||||:|||||||||||| ||||||||
Db        113 GTRSSRARTTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLASL 172

Qy        177 LGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              ||||||| ||||||:|||||||||||||||||||||||||| ||||||||||
Db        173 LGAGALRSPPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 6
Q810F7
ID   Q810F7      PRELIMINARY;      PRT;   157 AA.
AC   Q810F7;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=Artn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Liver;
RA   Carmillo P., McAuliffe M., Tizard R., Cate R.L.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY230412; AAO73543.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
KW   Growth factor.
FT   NON_TER     157    157
SQ   SEQUENCE   157 AA;  16458 MW;  47A72BA029677870 CRC64;

  Query Match            43.2%;  Score 528;  DB 2;  Length 157;
  Best Local Similarity   67.9%;  Pred. No. 9.2e-22;
  Matches  112;  Conservative    5;  Mismatches   36;  Indels   12;  Gaps    2;

Qy          1 MELGLGGLSTLSHCPWPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60
              ||||||  : ||||  ||          |||||||||||||||| ||||    |||| |:
Db          1 MELGLGEPTALSHCLRPR--------WQPALWPTLAALALLSSVTEASLDPMSRSPASRD 52

Qy         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARA 116
              | |||| |  :|||| ||  || || |||||  :|||||| |     | |  || |||||
Db         53 VPSPVLAPPTDYLPGGHTAHLCSERALRPPPQSPQPAPPPPGPALQSPPAALRGARAARA 112

Qy        117 GGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGS 161
              |   |||||  |||||||||||| |||||| ||||:||||||||
Db        113 GTRSSRARATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGS 157


RESULT 7
Q9QZG3
ID   Q9QZG3      PRELIMINARY;      PRT;   125 AA.
AC   Q9QZG3;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=ARTN;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Cochlea;
RX   MEDLINE=20185640; PubMed=10719212; DOI=10.1016/S0169-328X(99)00328-9;
RA   Stover T., Gong T.L., Cho Y., Altschuler R.A., Lomax M.I.;
RT   "Expression of the GDNF family members and their receptors in the
RT   mature rat cochlea.";
RL   Brain Res. Mol. Brain Res. 76:25-35(2000).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF184919; AAF01241.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor.
FT   NON_TER       1      1
FT   NON_TER     125    125
SQ   SEQUENCE   125 AA;  12983 MW;  8EDE626E44B83231 CRC64;

  Query Match             41.1%;  Score 502;  DB 2;  Length 125;
  Best Local Similarity   78.4%;  Pred. No. 2e-20;
  Matches   98;  Conservative    3;  Mismatches   20;  Indels    4;  Gaps    1;

Qy         76 GRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRARAAGARGC 131
              | ||  || || |||||  :|||||| |    | |  || ||||||   |||||  ||||
Db          1 GHTAHLCSERALRPPPQSPQPAPPPPGPALQSPPAALRGARAARAGTRSSRARATDARGC 60

Qy        132 RLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPV 191
              ||||||||| |||||| ||||:||||||||||||||||||||||||||||| ||||||:
Db         61 RLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSPHDLSLASLLGAGALRSPPGSRPI 120

Qy        192 SQPCC 196
              |||||
Db        121 SQPCC 125


RESULT 8
NRTN_HUMAN
ID   NRTN_HUMAN     STANDARD;      PRT;   197 AA.
AC   Q99748;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Neurturin precursor.
GN   Name=NRTN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=97100947; PubMed=8945474; DOI=10.1038/384467a0;
RA   Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
RA   Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
RT   "Neurturin, a relative of glial-cell-line-derived neurotrophic
RT   factor.";
RL   Nature 384:467-470(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Melanoma;
RA   Blum H., Bauersachs S., Mewes H.-W., Weil B., Wiemann S.;
RL   Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   VARIANT HSCR SER-96.
RC   TISSUE=Peripheral blood lymphocytes;
RX   MEDLINE=98367034; PubMed=9700200; DOI=10.1093/hmg/7.9.1449;
RA   Doray B., Salomon R., Amiel J., Pelet A., Touraine R., Billaud M.,
RA   Attie T., Bachy B., Munnich A., Lyonnet S.;
RT   "Mutation of the RET ligand, neurturin, supports multigenic
RT   inheritance in Hirschsprung disease.";
RL   Hum. Mol. Genet. 7:1449-1452(1998).
CC   -!- FUNCTION: Supports the survival of sympathetic neurons in culture.
CC       May regulate the development and maintenance of the CNS. Might
CC       control the size of non-neuronal cell population such as
CC       haemopoietic cells.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- DISEASE: Defects in NRTN are a cause of Hirschsprung disease
CC       (HSCR) [MIM:142623]. In association with mutations of RET gene,
CC       and possibly with other loci, defects in NRTN are involved in
CC       Hirschsprung's disease. This genetic disorder of neural crest
CC       development is characterized by the absence of intramural ganglion
CC       cells in the hindgut, often resulting in intestinal obstruction.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U78110; AAC50898.1; -.
DR   EMBL; AL161995; CAB82327.1; -.
DR   PIR; T47159; T47159.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:8007; NRTN.
DR   H-InvDB; HIX0014687; -.
DR   MIM; 602018; -.
DR   MIM; 142623; -.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0000165; P:MAPKKK cascade; TAS.
DR   GO; GO:0007399; P:neurogenesis; TAS.
DR   GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Disease mutation; Growth factor; Hirschsprung disease; Polymorphism;
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   PROPEP       20     95       By similarity.
FT   CHAIN        96    197       Neurturin.
FT   DISULFID    103    165       By similarity.
FT   DISULFID    130    194       By similarity.
FT   DISULFID    134    196       By similarity.
FT   DISULFID    164    164       Interchain (By similarity).
FT   VARIANT      96     96       A -> S (in HSCR; associated to a RET
FT                                mutation; incomplete penetrance;
FT                                dbSNP:1801281).
FT                                /FTId=VAR_009498.
SQ   SEQUENCE   197 AA;  22405 MW;  91AFAC8C3F8971FD CRC64;

  Query Match             20.7%;  Score 253.5;  DB 1;  Length 197;
  Best Local Similarity   35.8%;  Pred. No. 8.3e-07;
  Matches   78;  Conservative   18;  Mismatches   75;  Indels   47;  Gaps    9;

Qy         16 WPRRQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVL----ASPAG 71
              |  |:   ||     | | |  |  |   :| :    :  |  :| |  :     :|
Db         21 WMCRE---GLLLSHRLGPALVPLHRLPRTLDARIARLAQYRALLQGAPDAMELRELTP-- 75

Qy         72 HLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARA-AGARG 130
                    | :||    || | |                        |||    ||||  |||
Db         76 ---------W-AGR----PPGPRR------------------RAGPRRRRARARLGARP 102

Qy        131 CRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRP 190
              | ||   | |  ||||: ||| | ||:|:|:|  |   :|| |  |     ||     |
Db        103 CGLRELEVRVSELGLGYASDETVLFRYCAGACEAAARVYDLGLRRLRQRRRLR---RERV 159

Qy        191 VSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 227
               :|||||| ||  |||:| :| : ||  |||  | |:
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Db        160 RAQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECACV 197


RESULT 9
PSPN_HUMAN
ID   PSPN_HUMAN     STANDARD;      PRT;   156 AA.
AC   O60542;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=PSPN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040962; AAC39640.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:9579; PSPN.
DR   MIM; 602921; -.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0007417; P:central nervous system development; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  16600 MW;  6547751653A7044A CRC64;

  Query Match             20.0%;  Score 244;  DB 1;  Length 156;
  Best Local Similarity   44.8%;  Pred. No. 2.3e-06;
  Matches   56;  Conservative   17;  Mismatches   36;  Indels   16;  Gaps    3;

Qy        112 RAARAGG-------PGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-R 163
              : |:|||       | :| | | :  |:| |  : |  ||||: |:| | ||:|:||| |
Db         40 QVAKAGGTWLGTHRPLARLRRALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPR 99

Qy        164 RARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATA 223
                ||: | |:|| | | |       |    |||||||  |:|:|    |: : :||| |
Db        100 GARTQHGLALARLQGQG--------RAHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAA 151

Qy        224 CGCLG 228
              ||| |
Db        152 CGCGG 156


RESULT 10
Q811Q5
ID   Q811Q5      PRELIMINARY;      PRT;   195 AA.
AC   Q811Q5;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Neurturin.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Substantia nigra;
RX   PubMed=14757528; DOI=10.1016/j.devbrainres.2003.11.006;
RA   Cho J., Kholodilov N.G., Burke R.E.;
RT   "Patterns of developmental mRNA expression of neurturin and GFRalpha2
RT   in the rat striatum and substantia nigra do not suggest a role in the
RT   regulation of natural cell death in dopamine neurons.";
RL   Brain Res. Dev. Brain Res. 148:143-149(2004).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Substantia nigra;
RA   Cho J.W., Kholodilov N.G., Burke R.E.;
RL   Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY190603; AAO27768.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   195 AA;  22184 MW;  55789405F290AD68 CRC64;

  Query Match             19.8%;  Score 242;  DB 2;  Length 195;
  Best Local Similarity   35.8%;  Pred. No. 3.5e-06;
  Matches   76;  Conservative   17;  Mismatches   83;  Indels   36;  Gaps    8;

Qy         32 WPTLAALALLSS------------VAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 79
              |   | ::|: |            :    || |    ||   ||  |          | |
Db          4 WKAAALVSLICSSLLSVWMCQEGLLLGHRLGPA---LAPLRRPPRTL--------DARIA 52

Qy         80 RWCSGRA---RRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQ 136
              |    ||      |      |   | | ||  ||      |  ||  |    |:| | ||
Db         53 RLAQYRALLQGAPDAVELRELSPWVARPSG-PR-----RRAGPRRRRARPGSRPCGLREL 106

Qy        137 LVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCC 196
               | |  ||||: ||| | ||:|:|:|  |   :|| |  |     :|    |  : |||
Db        107 EVRVSELGLGYTSDETVLFRYCAGACEAAIRIYDLGLRRLRQRRRVRK---ERVRAHPCC 163

Qy        197 RPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 227
              ||| ||  |||:||:| : |:  |||  | |:
Db        164 RPTAYEDEVSFLDVHSRYHTLQELSARECACV 195


RESULT 11
NRTN_MOUSE
ID   NRTN_MOUSE     STANDARD;      PRT;   195 AA.
AC   P97463;
DT   01-NOV-1997 (Rel. 35, Created)
```

```
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Neurturin precursor.
GN   Name=Nrtn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A., AND SEQUENCE OF 96-110; 127-135; 155-177 AND
RP   181-190.
RX   MEDLINE=97100947; PubMed=8945474; DOI=10.1038/384467a0;
RA   Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
RA   Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
RT   "Neurturin, a relative of glial-cell-line-derived neurotrophic
RT   factor.";
RL   Nature 384:467-470(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=FVB/N; TISSUE=Mammary gland;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC   -!- FUNCTION: Supports the survival of sympathetic neurons in culture.
CC       May regulate the development and maintenance of the CNS. Might
CC       control the size of non-neuronal cell population such as
CC       haemopoietic cells.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Widespread distribution.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U78109; AAC52954.1; -.
DR   EMBL; BC057993; AAH57993.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:108417; Nrtn.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Direct protein sequencing; Growth factor; Signal.
FT   SIGNAL       1    19       Potential.
FT   PROPEP      20    95       By similarity.
FT   CHAIN       96   195       Neurturin.
FT   DISULFID   101   163       By similarity.
FT   DISULFID   128   192       By similarity.
FT   DISULFID   132   194       By similarity.
FT   DISULFID   162 - 162       Interchain (By similarity).
SQ   SEQUENCE   195 AA;  22219 MW;  ABE21BB35D417448 CRC64;

  Query Match             19.4%;  Score 237;  DB 1;  Length 195;
  Best Local Similarity   34.4%;  Pred. No. 6.5e-06;
  Matches   73;  Conservative   15;  Mismatches   72;  Indels   52;  Gaps    6;

Qy         23 LGLSAQPALWP------TLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGG 76
              ||    ||| |      || |     :   | |  ||  :   ||  |
Db         29 LGHRLGPALAPLRRPPRTLDARIARLAQYRALLQGAPDAVELRELSP------------ 75

Qy         77 RTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQ 136
                  |    || | |:                       |  ||  |    ||| | ||
Db         76 ----WA---ARIPGPR---------------------RRAGPRRRRARPGARPCGLREL 106

Qy        137 LVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCC 196
               | |  ||||: ||| | ||:|:|:|  |   :|| |  |     :|     |  : |||
Db        107 EVRVSELGLGYTSDETVLFRYCAGACEAAIRIYDLGLRRLRQRRRVR---RERARAHPCC 163

Qy        197 RPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 227
              ||| ||  |||:||:| : |:  |||  | |:
Db        164 RPTAYEDEVSFLDVHSRYHTLQELSARECACV 195


RESULT 12
PSPN_MOUSE
ID   PSPN_MOUSE     STANDARD;      PRT;   156 AA.
AC   O70300;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=Pspn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=129/SvJ;
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040960; AAC40057.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:1201684; Pspn.
DR   GO; GO:0005615; C:extracellular space; IDA.
DR   GO; GO:0001658; P:ureteric bud branching; IDA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
```

```
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  17030 MW;  7DC6DD98132E041B CRC64;

  Query Match             19.0%;  Score 232.5;  DB 1;  Length 156;
  Best Local Similarity   43.8%;  Pred. No. 9.5e-06;
  Matches   53;  Conservative   14;  Mismatches   45;  Indels    9;  Gaps    2;

Qy        109 RGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARS 167
              ||       |    |  | |||  |  :||  ||||: |:| | ||:|:||| : ||:
Db         44 RGTWTPHQGNNHVRLPRALAGSCRLWSLTLPVAELGLGYASEEKVIFRYCAGSCPQEART 103

Qy        168 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 227
              | | || | | |        |   :|||:|| |  |:|:|    |: : :||| ||||
Db        104 QHSLVLARLRGRG--------RAHGRPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCG 155

Qy        228 G 228
              |
Db        156 G 156


RESULT 13
PSPN_RAT
ID   PSPN_RAT       STANDARD;      PRT;   156 AA.
AC   O70301;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=Pspn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
RN   [2]
RP   SEQUENCE OF 1-78 FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Pons;
RX   MEDLINE=98374044; PubMed=9710270;
RX   DOI=10.1002/(SICI)1097-4547(19980815)53:4<494::AID-JNR12>3.0.CO;2-2;
RA   Jaszai J., Farkas L.M., Galter D., Reuss B., Strelau J., Unsicker K.,
RA   Krieglstein K.;
RT   "GDNF-related factor persephin is widely distributed throughout the
RT   nervous system.";
RL   J. Neurosci. Res. 53:494-501(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040961; AAC40058.1; -.
DR   EMBL; AJ005169; CAA06410.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   RGD; 3432; Pspn.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  17063 MW;  9631941CC69B00B0 CRC64;

  Query Match             18.2%;  Score 222;  DB 1;  Length 156;
  Best Local Similarity   35.0%;  Pred. No. 3.5e-05;
  Matches   57;  Conservative   20;  Mismatches   50;  Indels   36;  Gaps    5;

Qy         67 ASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAA 126
              |  |  |  |: |   :||  : | | :      | | |
Db         29 APAADELSSGKMAE--TGRTWK-PHQGNNNVRLPRALPGL-------------------- 65

Qy        127 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARSPHDLSLASLLGAGALRPP 185
                 |||  |  :||  ||||: |:| : ||:|:||| :  |: | | || | | |
Db         66 ----CRLWSLTLPVAELGLGYASEEKIIFRYCAGSCPQEVRTQHSLVLARLRGQG----- 116

Qy        186 PGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
                 |   :|||:|| |  |:|:| :  |: : :||| |||| |
Db        117 ---RAHGRPCCQPTSYADVTFLDDHHHWQQLPQLSAAACGCGG 156


RESULT 14
Q810F6
ID   Q810F6       PRELIMINARY;      PRT;    41 AA.
AC   Q810F6;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=Artn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Liver;
RA   Carmillo P., McAuliffe M., Tizard R., Cate R.L.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY230413; AAO73544.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor.
FT   NON_TER       1      1
SQ   SEQUENCE   41 AA;  4517 MW;  1ED39984A7D03EDB CRC64;

  Query Match             18.1%;  Score 221;  DB 2;  Length 41;
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```
  Best Local Similarity   95.1%;  Pred. No. 1.4e-05;
  Matches   39;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        188 SRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228
              |||:|||||||||||||||||||||||| ||||||||||
Db          1 SRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 41


RESULT 15
Q6LEL9
ID   Q6LEL9      PRELIMINARY;      PRT;   240 AA.
AC   Q6LEL9;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Neurotrophic factor.
GN   Name=GDNF;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98086214; PubMed=9426245; DOI=10.1016/S0378-1119(97)00506-4;
RA   Matsushita N., Fujita Y., Tanaka M., Nagatsu T., Kiuchi K.;
RT   "Cloning and structural organization of the gene encoding the mouse
RT   glial cell line-derived neurotrophic factor, GDNF.";
RL   Gene 203:149-157(1997).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; D88351; BAA13591.1; JOINED.
DR   EMBL; D88352; BAA13591.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0005615; C:extracellular space; TAS.
DR   GO; GO:0005160; F:transforming growth factor beta receptor bi. . .; TAS.
DR   GO; GO:0007422; P:peripheral nervous system development; IMP.
DR   GO; GO:0030432; P:peristalsis; IMP.
DR   GO; GO:0007179; P:transforming growth factor beta receptor si. . .; TAS.
DR   GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   240 AA;  26606 MW;  8F5C69E4C4F6CAD5 CRC64;

  Query Match           16.4%;  Score 200;  DB 2;  Length 240;
  Best Local Similarity   28.6%;  Pred. No. 0.00078;
  Matches   67;  Conservative   30;  Mismatches   99;  Indels   38;  Gaps    7;

Qy         19 RQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPA-GHLPGGR 77
              | |  |  ::  ||  :|   :|   | |          |      :| :|| |  | |
Db         20 RGAAAGRDSKMKLWDVVAVCLVLLHTASA---------FPLPAGKRLLEAPAEDHSLGHR 70

Qy         78 TARWC-SGRARRPPPQP-------------SRPAPPPPAPPSALPRGGRAARAG----- 117
                 :  :  :  |  |               |    |    :|||| |  :|
Db         71 RVPFALTSDSNMPEDYPDQFDDVMDFIQATIKRLKRSPDKQAAALPRRERNRQAAAASPE 130

Qy        118 ---GPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLA 174
                 | | |  :    ||| | :  : |  ||||: : | : ||:|||||  | : :|  |
Db        131 NSRGKGRRGQRGKNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCESAETMYDKILK 190

Qy        175 SLLGAGALRPPPGSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 227
              :|  :  |     |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        191 NLSRSRRLT----SDKVGQACCRPVAFDDDLSFLDDNLVYHILRKHSAKRCGCI 240


Search completed: March 27, 2005, 15:43:54
Job time : 90.0053 secs
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GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:17:42 ; Search time 98.0392 Seconds
(without alignments)
867.890 Million cell updates/sec

Title: US-09-357-349D-10
Perfect score: 1184
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 220

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_16Dec04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
4: geneseqp2001s:*
5: geneseqp2002s:*
6: geneseqp2003as:*
7: geneseqp2003bs:*
8: geneseqp2004s:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1184	100.0	220	3	AAY84583	Aay84583 Amino aci
2	1184	100.0	220	3	AAY44776	Aay44776 Short spl
3	1184	100.0	220	3	AAY68710	Aay68710 A human p
4	1184	100.0	220	4	AAB50978	Aab50978 Human PRO
5	1184	100.0	220	5	AAU86158	Aau86158 Human PRO
6	1184	100.0	220	5	ABB84975	Abb84975 Human PRO
7	1184	100.0	220	5	ABG30698	Abg30698 Human art
8	1184	100.0	220	5	ABB82388	Abb82388 Human neu
9	1184	100.0	220	5	ABB95581	Abb95581 Human ang
10	1184	100.0	220	5	AAO22940	Aao22940 Human foe
11	1184	100.0	220	6	ABU56702	Abu56702 Lung canc
12	1184	100.0	220	6	ABU56539	Abu56539 Lung canc
13	1184	100.0	220	6	ABU56703	Abu56703 Lung canc
14	1184	100.0	220	6	ABU56540	Abu56540 Lung canc
15	1184	100.0	220	6	ABU71444	Abu71444 Human neo
16	1184	100.0	220	7	ADD10607	Add10607 Human sec
17	1184	100.0	220	7	ADD11567	Add11567 Human sec
18	1184	100.0	220	7	ADD37360	Add37360 Human sec
19	1184	100.0	220	7	ADJ37343	Adj37343 Human tum
20	1184	100.0	220	7	ADN39086	Adn39086 Cancer/an
21	1184	100.0	220	7	ADN39084	Adn39084 Cancer/an
22	1184	100.0	220	8	ADE41568	Ade41568 Human sec
23	1184	100.0	220	8	ADG68267	Adg68267 Human PRO
24	1184	100.0	220	8	ADH43751	Adh43751 Human PRO
25	1184	100.0	220	8	ADK83096	Adk83096 Human PRO
26	1184	100.0	220	8	ADR16439	Adr16439 Human pre
27	1170	98.8	228	3	AAY44775	Aay44775 Long spli
28	1170	98.8	228	3	AAY93559	Aay93559 A human G
29	1170	98.8	228	6	ABU56705	Abu56705 Lung canc
30	1170	98.8	228	6	ABU56542	Abu56542 Lung canc
31	1170	98.8	228	7	ADN39090	Adn39090 Cancer/an
32	1075	90.8	237	3	AAY84585	Aay84585 Alternati
33	1075	90.8	237	3	AAY92037	Aay92037 Human art
34	1075	90.8	237	5	ABG30699	Abg30699 Human art
35	1075	90.8	237	6	ABU56704	Abu56704 Lung canc
36	1075	90.8	237	6	ABU56541	Abu56541 Lung canc
37	1075	90.8	237	7	ADN39088	Adn39088 Cancer/an
38	1062	89.7	237	3	AAY68706	Aay68706 A human n
39	1062	89.7	237	5	AAO22936	Aao22936 Human pre
40	892	75.3	224	5	ABB82390	Abb82390 Rat neubl
41	892	75.3	224	5	AAG79609	Aag79609 Rat varia
42	892	75.3	224	5	ABJ15114	Abj15114 Rat pre-p
43	892	75.3	224	8	ADR16458	Adr16458 Rat neubl
44	868.5	73.4	200	3	AAY68705	Aay68705 Amino aci
45	868.5	73.4	200	5	AAO22935	Aao22935 Human neu

ALIGNMENTS

RESULT 1
AAY84583
ID AAY84583 standard; protein; 220 AA.
XX
AC AAY84583;
XX
DT 25-JUL-2000 (first entry)
XX
DE Amino acid sequence of a human pre-pro-artemin polypeptide.
XX
KW Human; artemin; growth factor; neurotrophic factor; trophic support;
KW neuron; trigeminal ganglion neuron; nodose ganglion neuron;
KW superior cervical ganglion neuron; midbrain neuron; Alzheimer's disease;
KW peripheral neuropathy; amylotrophic lateral sclerosis; ischemic stroke;
KW Parkinson's disease; Huntington's disease; acute brain injury;
KW acute spinal cord injury; nervous system tumour; blastoma;
KW multiple sclerosis; infection; enteric disease; idiopathic constipation;
KW Parkinson's disease; small cell lung carcinoma.
XX
OS Homo sapiens.
XX
PN WO200018799-A1.
XX
PD 06-APR-2000.
XX
PF 29-SEP-1999; 99WO-US022604.
XX
PR 29-SEP-1998; 98US-00163283.
PR 12-NOV-1998; 98US-0108148P.
PR 22-DEC-1998; 98US-00218698.
XX
PA (UNIW) UNIV WASHINGTON.
XX
PI Milbrandt JD, Baloh RH;
XX
DR WPI; 2000-293109/25.
DR N-PSDB; AAA12540.
XX
PT Isolated artemin growth factor proteins and the nucleic acids that encode
PT them, useful for treating a range of degenerative neuronal disorders such
PT as Parkinson's disease and Huntington's disease.
XX
PS Claim 5; Fig 1B; 96pp; English.
XX
CC The present sequence represents a pre-pro- artemin growth factor protein.
CC Artemin is a neurotrophic factor that belongs to the GDNF (glial cell
CC line-derived neurotrophic factor)/neurturin/persephin family of growth
CC factors and promotes differentiation, maintains mature phenotype and

```
CC   provides trophic support, promoting growth and survival of neurons.
CC   Artemin promotes the survival of trigeminal ganglion neurons, nodose
CC   ganglion neurons, superior cervical ganglion neurons and tyrosine-
CC   hydroxylase-expressing dopaminergic ventral midbrain neurons. Artemin is
CC   the only member of the GDNF family that binds to GFR-alpha (growth factor
CC   receptor-alpha) and activates the GFR-alpha3/RET (Ret protein- tyrosine
CC   kinase) receptor complex and additionally, like GDNF and neurturin,
CC   artemin also binds to and activates GFRalpha1/RET. Artemin polypeptides
CC   and polynucleotides are administered to treat peripheral neuropathy,
CC   amylotrophic lateral sclerosis, Alzheimer's disease, Parkinson's disease,
CC   Huntington's disease, ischemic stroke, acute brain injury, acute spinal
CC   cord injury, a nervous system tumour (e.g. blastomas), multiple
CC   sclerosis, infection or enteric disease (e.g. idiopathic constipation or
CC   constipation associated with Parkinson's disease, spinal cord injury or
CC   use of opiate pain killers). They may also be used to treat a patient
CC   suffering from small cell lung carcinoma
XX
SQ   Sequence 220 AA;

  Query Match             100.0%;  Score 1184;  DB 3;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-77;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 2
AAY44776
ID   AAY44776 standard; protein; 220 AA.
XX
AC   AAY44776;
XX
DT   17-MAY-2000  (first entry)
XX
DE   Short splice variant of human Enovin.
XX
KW   Enovin; EVN; neurotrophic growth factor; chromosome 1p31.3-32;
KW   glial cell-line derived neurotrophic factor; GDNF; neuroprotective;
KW   GDNF family receptor alpha-3; GFR alpha 3; nootropic; analgesic;
KW   antirheumatic; cerebroprotective; antiparkinsonian; antiinflammatory;
KW   antidiarrhoeal; laxative; antiemetic; neurological disorder; Parkinson's;
KW   Alzheimer's; Huntington's; neuropathy; multiple sclerosis; stroke; pain;
KW   endocrine neoplasia; prion; rheumatic; inflammation; gastrointestinal;
KW   dyspepsia; constipation; intestinal atony; emesis; diarrhoea;
KW   Crohn's disease; bowel hypersensitivity; gene therapy; splice variant.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .39
FT                   /label= Signal_Peptide
FT   Peptide         40. .107
FT                   /label= Pro_sequence
FT   Misc-difference 82. .220
FT                   /note= "This region has been claimed specifically"
FT   Protein         108. .220
FT                   /label= Mature_Enovin
FT                   /note= "Homologous to GDNF, Neurturin and Persephin"
FT   Misc-difference 123
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 150
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 154
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 187
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 188
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Modified-site   202. .204
FT                   /note= "Asn is N-glycosylated"
FT   Misc-difference 216
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
FT   Misc-difference 218
FT                   /note= "Conserved residue characteristic of Transforming
FT                   Growth Factor-beta (TGF-beta) family"
XX
PN   WO200004050-A2.
XX
PD   27-JAN-2000.
XX
PF   14-JUL-1999;   99WO-EP005031.
XX
PR   14-JUL-1998;   98GB-00015283.
PR   12-FEB-1999;   99US-00248772.
PR   08-JUN-1999;   99US-00327668.
XX
PA   (JANC ) JANSSEN PHARM NV.
XX
PI   Geerts HA,  Masure SLJ,  Meert TF,  Cik M,  Ver Donck LAL;
XX
DR   WPI; 2000-182404/16.
DR   N-PSDB; AAZ50091.
XX
PT   Novel human neurotrophic growth factor designated enovin used to treat
PT   neurological disorders, neuronal disorders, peripheral neuropathy, brain
PT   injury, nervous system disorders, prion associated and gastrointestinal
PT   diseases.
XX
PS   Claim 11; Fig 24; 125pp; English.
XX
CC   The present sequence is a short splice variant of human Enovin (EVN). EVN
CC   is a neurotrophic growth factor, that belongs to glial cell-line derived
CC   neurotrophic factor (GDNF) family. It binds to GDNF family receptor alpha
CC   -3 (GFR alpha 3). Enovin gene is located on chromosome 1p31.3-32. It is
CC   predominantly expressed in heart, skeletal muscle, pancreas and prostate.
CC   It has nootropic, analgesic, neuroprotective, antirheumatic,
CC   cerebroprotective, antiparkinsonian, antiinflammatory, antidiarrhoeal,
CC   laxative and antiemetic activity. It can be used to treat neurological
CC   disorders like Parkinson's, Alzheimer's and Huntington's disease,
CC   neuropathy, multiple sclerosis, endocrine neoplasia, prion associated
CC   diseases, stroke, pain, rheumatic/inflammatory diseases and
CC   gastrointestinal disorders like dyspepsia, constipation, intestinal
CC   atony, emesis, diarrhoea, Crohn's disease and bowel hypersensitivity. EVN
CC   polynucleotide can be used in gene therapy
XX
SQ   Sequence 220 AA;

  Query Match             100.0%;  Score 1184;  DB 3;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-77;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy         121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy         181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
                |||||||||||||||||||||||||||||||||||||||
Db         181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 3
AAY68710
ID   AAY68710 standard; protein; 220 AA.
XX
AC   AAY68710;
XX
DT   05-MAY-2000  (first entry)
XX
DE   A human pre-pro-neublastin neurotrophic factor.
XX
KW   Neurotrophic factor; neublastin; neurodegenerative disease;
KW   cerebral ischemic neuronal damage; traumatic brain injury;
KW   peripheral neuropathy; Alzheimer's disease; Huntington's disease;
KW   Parkinson's disease; Parkinson-Plus syndrome;
KW   progressive Supranuclear Palsy; Olivopontocerebellar atrophy;
KW   Shy-Drager Syndrome; Guamanian parkinsonism dementia complex;
KW   amyotrophic lateral sclerosis; memory impairment; neuronal disorder;
KW   neuropathy; ischemic stroke; acute brain injury;
KW   acute spinal cord injury; nervous system tumour; multiple sclerosis;
KW   neurotoxin exposure; metabolic disease; diabetes; renal dysfunction;
KW   eye disorder.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Disulfide-bond  43. .108
FT   Disulfide-bond  70. .136
FT   Disulfide-bond  74. .138
FT   Modified-site   122
FT                   /note= "glycosylated residue"
XX
PN   WO200001815-A2.
XX
PD   13-JAN-2000.
XX
PF   05-JUL-1999;   99WO-DK000384.
XX
PR   06-JUL-1998;   98DK-00000904.
PR   09-JUL-1998;   98US-0092229P.
PR   19-AUG-1998;   98DK-00001048.
PR   25-AUG-1998;   98US-0097774P.
PR   06-OCT-1998;   98DK-00001265.
PR   13-OCT-1998;   98US-0103908P.
PR   02-JUL-1999;   99US-00347613.
XX
PA   (NEUR-) NEUROSEARCH AS.
XX
PI   Johansen TE,  Blom N,  Hansen C;
XX
DR   WPI; 2000-171013/15.
DR   N-PSDB; AAZ60563.
XX
PT   New isolated polypeptides, used for treating e.g. neurodegenerative
PT   disease or disorder, neuronal damage or neuronal disorder of the
PT   peripheral nervous system, the medulla or the spinal cord.
XX
PS   Claim 14; Page 97; 106pp; English.
XX
CC   The present sequence represents a neurotrophic factor designated
CC   neublastin. Neublastin is a member of the glial cell line-derived
CC   neurotrophic factor sub-class of the transforming growth factor-beta
CC   superfamily of neurotrophic factors. Neublastin exhibits high affinity
CC   for the GFR-alpha3-RET receptor complex. The polypeptides can be used for
CC   treating a neurodegenerative disease or disorder, cerebral ischemic
CC   neuronal damage, traumatic brain injury, peripheral neuropathy,
CC   Alzheimer's disease, Huntington's disease, Parkinson's disease, Parkinson
CC   -Plus syndromes, progressive Supranuclear Palsy, Olivopontocerebellar
CC   atrophy, Shy-Drager Syndrome, Guamanian parkinsonism dementia complex,
CC   amyotrophic lateral sclerosis, memory impairment, or a neuronal disorder
CC   of the peripheral nervous system, the medulla or the spinal cord. They
CC   can also be used for treating various neuropathies. They can also be used
CC   for treating ischemic stroke, acute brain injury, acute spinal cord
CC   injury, nervous system tumours, multiple sclerosis, exposure to
CC   neurotoxins, metabolic diseases such as diabetes or renal dysfunctions
CC   and damage caused by infectious agents, or various disorders in the eye
XX
SQ   Sequence 220 AA;

  Query Match            100.0%;  Score 1184;  DB 3;  Length 220;
  Best Local Similarity  100.0%;  Pred. No. 2.3e-77;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy           1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db           1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy          61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy         121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
                ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy         181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
                |||||||||||||||||||||||||||||||||||||||
Db         181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 4
AAB50978
ID   AAB50978 standard; protein; 220 AA.
XX
AC   AAB50978;
XX
DT   21-MAR-2001  (first entry)
XX
DE   Human PRO3562 protein.
XX
KW   Human; PRO; cytostatic; nootropic; neuroprotective; respiratory general;
KW   antiinflammatory; antiangiogenic; immunosuppressive; immunostimulant;
KW   PRO agonist; cancer; inflammatory disorder; immunological disorder.
XX
OS   Homo sapiens.
XX
PN   WO200073348-A2.
XX
PD   07-DEC-2000.
XX
PF   30-MAY-2000; 2000WO-US014941.
XX
PR   02-JUN-1999;   99WO-US012252.
PR   22-JUN-1999;   99US-0140650P.
PR   23-JUN-1999;   99US-0141037P.
PR   20-JUL-1999;   99US-0144758P.
PR   01-SEP-1999;   99WO-US020111.
PR   08-SEP-1999;   99WO-US020594.
PR   29-OCT-1999;   99US-0162506P.
PR   30-NOV-1999;   99WO-US028313.
PR   01-DEC-1999;   99WO-US028634.
PR   02-DEC-1999;   99WO-US028551.
PR   09-DEC-1999;   99US-0170262P.
PR   16-DEC-1999;   99WO-US030095.
PR   20-DEC-1999;   99WO-US030999.
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PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
PR 18-FEB-2000; 2000WO-US004341.
PR 18-FEB-2000; 2000WO-US004342.
PR 02-MAR-2000; 2000WO-US005841.
PR 03-MAR-2000; 2000US-0187202P.
PR 10-MAR-2000; 2000WO-US006319.
PR 15-MAR-2000; 2000WO-US006884.
PR 30-MAR-2000; 2000WO-US008439.
PR 17-MAY-2000; 2000WO-US013705.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Goddard A, Gurney AL, Hebert C, Henzel W, Kabakoff RC;
PI Shelton DL, Smith V, Watanabe CK, Wood WI;
XX
DR WPI; 2001-016509/02.
DR N-PSDB; AAC91580.
XX
PT Twenty eight nucleic acids encoding PRO polypeptides which are useful for
PT treating various tumors, e.g. breast cancer, and other inflammatory,
PT angiogenic and immunological disorders.
XX
PS Claim 31; Fig 56; 188pp; English.
XX
CC The present sequence is one of twenty eight novel PRO polypeptides. The
CC PRO polypeptides and their agonists, including antibodies, peptides, and
CC small molecule agonists, may be used to treat various tumours, e.g.,
CC cancers such as breast cancer, ovarian cancer, renal cancer, colorectal
CC cancer, uterine cancer, prostate cancer, lung cancer, bladder cancer,
CC central nervous system cancer, melanoma or leukaemia. They are also
CC useful for treating other disorders such as neuronal, glial, astrocytal,
CC hypothalamic and other glandular, macrophagal, epithelial, stromal and
CC blastocoelic disorders, and inflammatory, angiogenic and immunological
CC disorders
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 4; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 5
AAU86158
ID AAU86158 standard; protein; 220 AA.
XX
AC AAU86158;
XX
DT 15-JUL-2002 (first entry)
XX
DE Human PRO3562 polypeptide.
XX
KW Human; PRO; benign tumour; malignant tumour; lymphoid malignancy;
KW leukaemia; neuronal disorder; stromal disorder; blastocoelic disorder;
KW inflammatory disorder; immune disorder; angiogenic disorder; cytostatic;
KW neuroprotective.
XX
OS Homo sapiens.
XX
PN WO200153486-A1.
XX
PD 26-JUL-2001.
XX
PF 11-FEB-2000; 2000WO-US003565.
XX
PR 08-MAR-1999; 99WO-US005028.
PR 11-MAR-1999; 99US-0123972P.
PR 11-MAY-1999; 99US-0133459P.
PR 02-JUN-1999; 99WO-US012252.
PR 22-JUN-1999; 99US-0140650P.
PR 22-JUN-1999; 99US-0140653P.
PR 20-JUL-1999; 99US-0144758P.
PR 26-JUL-1999; 99US-0145698P.
PR 28-JUL-1999; 99US-0146222P.
PR 17-AUG-1999; 99US-0149395P.
PR 31-AUG-1999; 99US-0151689P.
PR 01-SEP-1999; 99WO-US020111.
PR 15-SEP-1999; 99WO-US021090.
PR 30-NOV-1999; 99WO-US028313.
PR 01-DEC-1999; 99WO-US028301.
PR 01-DEC-1999; 99WO-US028634.
PR 05-JAN-2000; 2000WO-US000219.
XX
PA (GETH) GENENTECH INC.
XX
PI Ashkenazi AJ, Goddard A, Godowski PJ, Gurney AL, Hillan KJ;
PI Marsters SA, Pan J, Pitti RM, Roy MA, Smith V, Stone DM;
PI Watanabe CK, Wood WI;
XX
DR WPI; 2002-205567/26.
DR N-PSDB; ABK40284.
XX
PT Thirty five nucleic acids encoding PRO polypeptides, useful for treating
PT benign or malignant tumors, leukemias and lymphoid malignancies,
PT inflammatory, angiogenic and immunologic disorders.
XX
PS Claim 61; Fig 62; 302pp; English.
XX
CC The present invention relates to the isolation of novel human PRO
CC polypeptides and the polynucleotide sequences encoding them. The PRO
CC polypeptides, agonists, antagonists or anti-PRO antibodies are useful for
CC treating benign or malignant tumours (e.g. renal, kidney, bladder,
CC breast, etc), leukaemias and lymphoid malignancies, other disorders such
CC as neuronal, glial, astrocytal, hypothalamic, glandular, macrophagal,
CC stromal and blastocoelic disorders, inflammatory, immune and angiogenic
CC disorders. The polynucleotide sequences are also useful in gene therapy.
CC AAU86128-AAU86162 represent the human PRO polypeptides of the invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 5; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 6
ABB84975
ID ABB84975 standard; protein; 220 AA.
XX
AC ABB84975;
XX
DT 16-MAY-2002 (first entry)
XX
DE Human PRO3562 protein sequence SEQ ID NO:318.
XX
KW Human; angiogenesis; cardiant; cytostatic; antiangiogenic; hypotensive;
KW vulnerary; antiarteriosclerotic; PRO agonist; PRO antagonist; trauma;
KW gene therapy; cardiovascular disorder; endothelial disorder; cancer;
KW angiogenic disorder; cardiac hypertrophy; atherosclerosis; hypertension;
KW age-related macular degeneration; arterial restenosis; angina;
KW rheumatoid arthritis; myocardial infarction; thrombophlebitis;
KW lymphangitis; tumour angiogenesis; breast carcinoma; liver carcinoma;
KW wound healing; chromosome mapping; gene mapping.
XX
OS Homo sapiens.
XX
PN WO200200690-A2.
XX
PD 03-JAN-2002.
XX
PF 20-JUN-2001; 2001WO-US019692.
XX
PR 23-JUN-2000; 2000US-0213637P.
PR 20-JUL-2000; 2000US-0219556P.
PR 25-JUL-2000; 2000US-0220624P.
PR 25-JUL-2000; 2000US-0220664P.
PR 28-JUL-2000; 2000WO-US020710.
PR 02-AUG-2000; 2000US-0222695P.
PR 17-AUG-2000; 2000US-00643657.
PR 23-AUG-2000; 2000WO-US023522.
PR 24-AUG-2000; 2000WO-US023328.
PR 07-SEP-2000; 2000US-0230978P.
PR 18-SEP-2000; 2000US-00664610.
PR 18-SEP-2000; 2000US-00665350.
PR 24-OCT-2000; 2000US-0242922P.
PR 08-NOV-2000; 2000US-00709238.
PR 08-NOV-2000; 2000WO-US030952.
PR 10-NOV-2000; 2000WO-US030873.
PR 01-DEC-2000; 2000WO-US032678.
PR 20-DEC-2000; 2000US-00747259.
PR 20-DEC-2000; 2000WO-US034956.
PR 22-JAN-2001; 2001US-00767609.
PR 28-FEB-2001; 2001US-00796498.
PR 28-FEB-2001; 2001WO-US006520.
PR 01-MAR-2001; 2001WO-US006666.
PR 09-MAR-2001; 2001US-00802706.
PR 14-MAR-2001; 2001US-00808689.
PR 22-MAR-2001; 2001US-00816744.
PR 05-APR-2001; 2001US-00828366.
PR 10-MAY-2001; 2001US-00854208.
PR 10-MAY-2001; 2001US-00854280.
PR 25-MAY-2001; 2001US-00866028.
PR 25-MAY-2001; 2001US-00866034.
PR 25-MAY-2001; 2001WO-US017092.
PR 30-MAY-2001; 2001US-00870574.
PR 30-MAY-2001; 2001WO-US017443.
PR 01-JUN-2001; 2001WO-US017800.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Ferrara N, Gerber H, Gerritsen ME, Goddard A;
PI Godowski PJ, Gurney AL, Hillan KJ, Marsters SA, Pan J, Paoni NF;
PI Stephan JF, Watanabe CK, Williams PM, Wood WI, Ye W;
XX
DR WPI; 2002-090516/12.
DR N-PSDB; ABL88230.
XX
PT One hundred and eighty seven nucleic acids encoding PRO polypeptides,
PT useful in diagnosis and treatment of cardiovascular (e.g. myocardial
PT infarction), endothelial or angiogenic disorders in a mammal.
XX
PS Claim 11; Fig 318; 565pp; English.
XX
CC ABL88072 to ABL88258 encode the PRO proteins given in ABB84817 to
CC ABB85003. The PRO proteins and polynucleotides have cardiant, cytostatic,
CC antiangiogenic, hypotensive, vulnerary and antiarteriosclerotic
CC activities, and can be used in gene therapy. The PRO polynucleotides,
CC proteins, agonists and antagonists are useful for treating or diagnosing
CC a cardiovascular, endothelial or angiogenic disorder in a mammal, e.g.
CC cardiac hypertrophy, trauma, cancer, age-related macular degeneration,
CC atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis,
CC angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour
CC angiogenesis (such as breast carcinoma and liver carcinoma) and wound
CC healing. The PRO polynucleotides have applications in molecular biology,
CC including use as hybridisation probes, and in chromosome and gene
CC mapping. ABL88259 to ABL88267 represent primers and probes used in the
CC exemplification of the present invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 5; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 7
ABG30698
ID ABG30698 standard; protein; 220 AA.
XX
AC ABG30698;
XX
DT 07-OCT-2002 (first entry)
XX
DE Human artemin polypeptide #1.
XX
KW Human; artemin; hyperalgesia; trauma; surgery; stroke; ischaemia;
KW infection; metabolic disease; nutritional deficiency; malignancy;
KW peripheral neuropathy; diabetic neuropathy; neuronal death;
KW neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;
KW Huntington's chorea; necrosis; neuroprotective; cerebroprotective;
KW analgesic; nootropic; protein therapy.
XX
OS Homo sapiens.
XX
PN WO200251433-A2.
XX
PD 04-JUL-2002.
XX
PF 19-DEC-2001; 2001WO-US050112.
XX
PR 22-DEC-2000; 2000US-0257601P.
XX
PA (GETH) GENENTECH INC.

XX
PI Shelton DL, Phillips HS;
XX
DR WPI; 2002-575358/61.
DR N-PSDB; ABK88906.
XX
PT Use of artemin and its agonist for manufacturing a medicament for
PT protecting neurons from injury-induced pathological changes and for
PT treating damage to neurons in a mammal without accompanying mechanical or
PT thermal hyperalgesia.
XX
PS Claim 21; Fig 3; 94pp; English.
XX
CC The invention relates to the use of artemin or its agonist in the
CC manufacture of a medicament for protecting neurons in a mammal from
CC injury-induced pathological changes without accompanying mechanical or
CC thermal hyperalgesia. Artemin and its agonist are useful for treating
CC damage to neurons in a mammal without accompanying mechanical or thermal
CC hyperalgesia, where the injury is associated with trauma, a toxic agent,
CC adverse side effects of other therapeutic agents, surgery, stroke,
CC ischaemia, infection, metabolic disease, nutritional deficiency,
CC malignancy or peripheral neuropathy (such as diabetic neuropathy).
CC Artemin may also be used to prevent neuronal death and increase neuronal
CC survival and in treating, preventing and ameliorating neurodegenerative
CC disorders such as Alzheimer's disease, Parkinson's disease, Huntington's
CC chorea, peripheral neuropathies and other conditions characterised by
CC necrosis or loss of neurons. This sequence represents a human artemin
CC polypeptide of the invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 5; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
Db 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
Db 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
Db 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
Db 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220

RESULT 8
ABB82388
ID ABB82388 standard; protein; 220 AA.
XX
AC ABB82388;
XX
DT 08-JAN-2003 (first entry)
XX
DE Human neublastin (NBN) polypeptide.
XX
KW NBN; neuropathy; pain; neublastin; analgesic; vaccine; gene therapy;
KW human.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1. .80
FT /note= "signal peptide"
FT Protein 81. .220
FT /note= "mature protein"
XX
PN WO200278730-A2.
XX
PD 10-OCT-2002.
XX
PF 28-FEB-2002; 2002WO-US006388.
XX
PR 28-MAR-2001; 2001US-00820421.
PR 28-MAR-2001; 2001US-0287554P.
XX
PA (BIOJ) BIOGEN INC.
XX
PI Sah DWY;
XX
DR WPI; 2002-740922/80.
DR N-PSDB; ABV73226.
XX
PT Treating neuropathic pain in a subject comprises administering a
PT formulation comprising a neublastin polypeptide.
XX
PS Claim 8; Page 53-54; 69pp; English.
XX
CC The invention relates to treating neuropathic pain in a subject and
CC involves administering a formulation comprising a neublastin (NBN)
CC polypeptide. The method is useful for treating, preventing or delaying
CC neuropathic pain. The present sequence represents the human neublastin
CC (NBN) polypeptide
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 5; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
Db 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
Db 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
Db 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
Db 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220

RESULT 9
ABB95581
ID ABB95581 standard; protein; 220 AA.
XX
AC ABB95581;
XX
DT 19-JUL-2002 (first entry)
XX
DE Human angiogenesis related protein PRO3562 SEQ ID NO: 318.
XX
KW Human; angiogenesis; PRO protein; cardiovascularisation; wound; cancer;
KW atherosclerosis; cardiac hypertrophy; gene therapy; endothelial disorder;
KW cardiant; cytostatic; antiangiogenic; hypotensive; vulnerary;
KW antiarteriosclerotic.
XX
OS Homo sapiens.
XX
PN WO200208284-A2.
XX
PD 31-JAN-2002.
XX
PF 09-JUL-2001; 2001WO-US021735.
XX

```
PR   20-JUL-2000; 2000US-0219556P.
PR   25-JUL-2000; 2000US-0220624P.
PR   25-JUL-2000; 2000US-0220664P.
PR   28-JUL-2000; 2000WO-US020710.
PR   02-AUG-2000; 2000US-0222695P.
PR   17-AUG-2000; 2000US-00643657.
PR   23-AUG-2000; 2000WO-US023522.
PR   24-AUG-2000; 2000WO-US023328.
PR   07-SEP-2000; 2000US-0230978P.
PR   18-SEP-2000; 2000US-00664610.
PR   18-SEP-2000; 2000US-00665350.
PR   24-OCT-2000; 2000US-0242922P.
PR   08-NOV-2000; 2000US-00709238.
PR   08-NOV-2000; 2000WO-US030952.
PR   10-NOV-2000; 2000WO-US030873.
PR   01-DEC-2000; 2000WO-US032678.
PR   20-DEC-2000; 2000US-00747259.
PR   20-DEC-2000; 2000WO-US034956.
PR   22-JAN-2001; 2001US-00767609.
PR   28-FEB-2001; 2001US-00796498.
PR   28-FEB-2001; 2001WO-US006520.
PR   01-MAR-2001; 2001WO-US006666.
PR   09-MAR-2001; 2001US-00802706.
PR   14-MAR-2001; 2001US-00808689.
PR   22-MAR-2001; 2001US-00816744.
PR   05-APR-2001; 2001US-00828366.
PR   10-MAY-2001; 2001US-00854208.
PR   10-MAY-2001; 2001US-00854280.
PR   25-MAY-2001; 2001US-00866028.
PR   25-MAY-2001; 2001US-00866034.
PR   25-MAY-2001; 2001WO-US017092.
PR   30-MAY-2001; 2001US-00870574.
PR   30-MAY-2001; 2001WO-US017443.
PR   01-JUN-2001; 2001WO-US017800.
PR   20-JUN-2001; 2001WO-US019692.
XX
PA   (GETH ) GENENTECH INC.
PA   (BAKE/) BAKER K P.
PA   (FERR/) FERRARA N.
PA   (GERB/) GERBER H.
PA   (GERR/) GERRITSEN M E.
PA   (GODD/) GODDARD A.
PA   (GODO/) GODOWSKI P J.
PA   (GURN/) GURNEY A L.
PA   (HILL/) HILLAN K J.
PA   (MARS/) MARSTERS S A.
PA   (PANJ/) PAN J.
PA   (PAON/) PAONI N F.
PA   (STEP/) STEPHAN J F.
PA   (WATA/) WATANABE C K.
PA   (WILL/) WILLIAMS P M.
PA   (WOOD/) WOOD W I.
XX
PI   Baker KP,  Ferrara N,  Gerber H,  Gerritsen ME,  Goddard A;
PI   Godowski PJ,  Gurney AL,  Hillan KJ,  Marsters SA,  Pan J,  Paoni NF;
PI   Stephan JF,  Watanabe CK,  Williams PM,  Wood WI,  Ye W;
XX
DR   WPI; 2002-171999/22.
DR   N-PSDB; ABL95719.
XX
PT   One hundred and eighty seven nucleic acids encoding PRO polypeptides,
PT   useful in diagnosis and treatment of cardiovascular (e.g. myocardial
PT   infarction), endothelial or angiogenic disorders in a mammal.
XX
PS   Claim 11; Fig 318; 567pp; English.
XX
CC   The present invention provides the protein and coding sequences of human
CC   PRO proteins. These are useful for treating or diagnosing a
CC   cardiovascular, endothelial or angiogenic disorder, including cardiac
CC   hypertrophy, trauma, cancer, age-related macular degeneration,
CC   atherosclerosis, hypertension, arterial restenosis, rheumatoid arthritis,
CC   angina, myocardial infarctions, thrombophlebitis, lymphangitis, tumour
CC   angiogenesis (such as breast carcinoma and liver carcinoma) and wound
CC   healing. The present sequence is a PRO protein of the invention
XX
SQ   Sequence 220 AA;

  Query Match             100.0%;  Score 1184;  DB 5;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-77;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 10
AAO22940
ID   AAO22940 standard; protein; 220 AA.
XX
AC   AAO22940;
XX
DT   19-DEC-2002  (first entry)
XX
DE   Human foetal brain neublastin protein.
XX
KW   Nootropic; neuroprotective; antiparkinsonian; anticonvulsant; analgesic;
KW   tranquiliser; antidiabetic; ophthalmological; neurodegenerative disorder;
KW   neublastin; ischemic neuronal damage; traumatic brain injury;
KW   peripheral neuropathy; neuropathic pain; Alzheimer's disease; diabetes;
KW   Huntington's disease; Parkinson's disease; amyotrophic lateral sclerosis;
KW   memory impairment; renal disease; glaucoma; gene therapy; human.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Peptide         1. .80
FT                   /label= Signal_peptide
FT   Disulfide-bond  43. .108
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Disulfide-bond  70. .136
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Disulfide-bond  74. .138
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Protein         81. .220
FT                   /label= Mature_protein
FT   Disulfide-bond  107
FT                   /label= Disulphide_bridge
FT                   /note= "Cysteine residues are linked by a disulfide bond"
FT   Modified-site   122
FT                   /note= "Asn is N-glycosylated"
XX
PN   WO200272826-A2.
XX
PD   19-SEP-2002.
XX
PF   12-MAR-2002; 2002WO-EP002691.
XX
PR   12-MAR-2001; 2001US-00804615.
XX
PA   (BIOJ ) BIOGEN INC.
```

PA (NSGE-) NS GENE AS.
XX
PI Sah DWY, Johansen TE, Rossomando A;
XX
DR WPI; 2002-713515/77.
DR N-PSDB; AAL53462.
XX
PT New truncated neublastin polypeptides lacking one or more amino-terminal
PT amino acids of a mature neublastin polypeptide useful for treating
PT neurodegenerative disorders, e.g. peripheral neuropathy, neuropathic
PT pain, brain injury.
XX
PS Claim 77; Page 118-119; 138pp; English.
XX
CC The invention relates to a truncated neublastin polypeptide comprising an
CC amino acid terminus that lacks one or more amino-terminal amino acids of
CC a mature neublastin polypeptide. The polypeptides and nucleic acids are
CC useful for treating neurodegenerative disorders such as ischemic neuronal
CC damage, traumatic brain injury, peripheral neuropathy, neuropathic pain,
CC Alzheimer's disease, Huntington's disease, Parkinson's disease,
CC amyotrophic lateral sclerosis, memory impairment, diabetes, renal
CC diseases, or glaucoma by moderating metabolism, growth, differentiation
CC or survival of a nerve or neuronal cell. The polynucleotides of the
CC invention can be used to treat disorders by gene therapy. This sequence
CC represents a human foetal brain neublastin protein of the invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 5; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 11
ABU56702
ID ABU56702 standard; protein; 220 AA.
XX
AC ABU56702;
XX
DT 02-APR-2003 (first entry)
XX
DE Lung cancer-associated polypeptide #295.
XX
KW Lung cancer-associated polypeptide; cytostatic; emphysema;
KW antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
KW small cell lung cancer; benign lesion; precancerous lesion; bronchitis;
KW chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
KW interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
XX
OS Unidentified.
XX
PN WO200286443-A2.
XX
PD 31-OCT-2002.
XX
PF 18-APR-2002; 2002WO-US012476.
XX
PR 18-APR-2001; 2001US-0284770P.
PR 10-MAY-2001; 2001US-0290492P.
PR 09-NOV-2001; 2001US-0339245P.
PR 13-NOV-2001; 2001US-0350666P.
PR 29-NOV-2001; 2001US-0334370P.
PR 12-APR-2002; 2002US-0372246P.
XX
PA (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI Aziz N, Murray R;
XX
DR WPI; 2003-093161/08.
DR N-PSDB; ABX76431.
XX
PT Detecting a lung cancer-associated transcript in a cell from a patient
PT for treating lung cancer, by contacting a biological sample from the
PT patient with a polynucleotide that exhibits increased or decreased
PT expression in lung cancer.
XX
PS Claim 27; Page 420; 453pp; English.
XX
CC The invention relates to a method for detecting a lung cancer-associated
CC transcript in a cell from a patient, comprising contacting a biological
CC sample from the patient with a polynucleotide that selectively hybridises
CC to a sequence that is at least 80 % identical to a gene that exhibits
CC increased or decreased expression in lung cancer samples. Lung cancer-
CC associated polynucleotides and polypeptides are used for identifying a
CC compound that modulates a lung cancer-associated polypeptide, for
CC inhibiting proliferation of a lung cancer-associated cell to treat lung
CC cancer in a patient and for treating a mammal having lung cancer by
CC administering a modulatory compound identified. The methods are useful
CC for treating lung cancer, such as small cell lung cancer, non-small cell
CC lung cancer or other benign or precancerous lesions, e.g. atelectasis,
CC emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,
CC hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and
CC bronchiectasis. The genes, polynucleotides and polypeptides are useful
CC for diagnostic purposes and as targets for screening for therapeutic
CC compounds that modulate lung cancer, such as antibodies. Sequences
CC ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
CC invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 6; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 12
ABU56539
ID ABU56539 standard; protein; 220 AA.
XX
AC ABU56539;
XX
DT 02-APR-2003 (first entry)
XX
DE Lung cancer-associated polypeptide #132.

XX
KW Lung cancer-associated polypeptide; cytostatic; emphysema;
KW antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
KW small cell lung cancer; benign lesion; precancerous lesion; bronchitis;
KW chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
KW interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
XX
OS Unidentified.
XX
PN WO200286443-A2.
XX
PD 31-OCT-2002.
XX
PF 18-APR-2002; 2002WO-US012476.
XX
PR 18-APR-2001; 2001US-0284770P.
PR 10-MAY-2001; 2001US-0290492P.
PR 09-NOV-2001; 2001US-0339245P.
PR 13-NOV-2001; 2001US-0350666P.
PR 29-NOV-2001; 2001US-0334370P.
PR 12-APR-2002; 2002US-0372246P.
XX
PA (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI Aziz N, Murray R;
XX
DR WPI; 2003-093161/08.
DR N-PSDB; ABX76266.
XX
PT Detecting a lung cancer-associated transcript in a cell from a patient
PT for treating lung cancer, by contacting a biological sample from the
PT patient with a polynucleotide that exhibits increased or decreased
PT expression in lung cancer.
XX
PS Claim 27; Page 290; 453pp; English.
XX
CC The invention relates to a method for detecting a lung cancer-associated
CC transcript in a cell from a patient, comprising contacting a biological
CC sample from the patient with a polynucleotide that selectively hybridises
CC to a sequence that is at least 80 % identical to a gene that exhibits
CC increased or decreased expression in lung cancer samples. Lung cancer-
CC associated polynucleotides and polypeptides are used for identifying a
CC compound that modulates a lung cancer-associated polypeptide, for
CC inhibiting proliferation of a lung cancer-associated cell to treat lung
CC cancer in a patient and for treating a mammal having lung cancer by
CC administering a modulatory compound identified. The methods are useful
CC for treating lung cancer, such as small cell lung cancer, non-small cell
CC lung cancer or other benign or precancerous lesions, e.g. atelectasis,
CC emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,
CC hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and
CC bronchiectasis. The genes, polynucleotides and polypeptides are useful
CC for diagnostic purposes and as targets for screening for therapeutic
CC compounds that modulate lung cancer, such as antibodies. Sequences
CC ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
CC invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 6; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
Db 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
Db 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
Db 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
Db 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220

RESULT 13
ABU56703
ID ABU56703 standard; protein; 220 AA.
XX
AC ABU56703;
XX
DT 02-APR-2003 (first entry)
XX
DE Lung cancer-associated polypeptide #296.
XX
KW Lung cancer-associated polypeptide; cytostatic; emphysema;
KW antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
KW small cell lung cancer; benign lesion; precancerous lesion; bronchitis;
KW chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
KW interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
XX
OS Unidentified.
XX
PN WO200286443-A2.
XX
PD 31-OCT-2002.
XX
PF 18-APR-2002; 2002WO-US012476.
XX
PR 18-APR-2001; 2001US-0284770P.
PR 10-MAY-2001; 2001US-0290492P.
PR 09-NOV-2001; 2001US-0339245P.
PR 13-NOV-2001; 2001US-0350666P.
PR 29-NOV-2001; 2001US-0334370P.
PR 12-APR-2002; 2002US-0372246P.
XX
PA (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI Aziz N, Murray R;
XX
DR WPI; 2003-093161/08.
DR N-PSDB; ABX76432.
XX
PT Detecting a lung cancer-associated transcript in a cell from a patient
PT for treating lung cancer, by contacting a biological sample from the
PT patient with a polynucleotide that exhibits increased or decreased
PT expression in lung cancer.
XX
PS Claim 27; Page 420; 453pp; English.
XX
CC The invention relates to a method for detecting a lung cancer-associated
CC transcript in a cell from a patient, comprising contacting a biological
CC sample from the patient with a polynucleotide that selectively hybridises
CC to a sequence that is at least 80 % identical to a gene that exhibits
CC increased or decreased expression in lung cancer samples. Lung cancer-
CC associated polynucleotides and polypeptides are used for identifying a
CC compound that modulates a lung cancer-associated polypeptide, for
CC inhibiting proliferation of a lung cancer-associated cell to treat lung
CC cancer in a patient and for treating a mammal having lung cancer by
CC administering a modulatory compound identified. The methods are useful
CC for treating lung cancer, such as small cell lung cancer, non-small cell
CC lung cancer or other benign or precancerous lesions, e.g. atelectasis,
CC emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,
CC hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and
CC bronchiectasis. The genes, polynucleotides and polypeptides are useful
CC for diagnostic purposes and as targets for screening for therapeutic
CC compounds that modulate lung cancer, such as antibodies. Sequences
CC ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
CC invention
XX
SQ Sequence 220 AA;

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  Query Match             100.0%;  Score 1184;  DB 6;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-77;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 14
ABU56540
ID ABU56540 standard; protein; 220 AA.
XX
AC ABU56540;
XX
DT 02-APR-2003 (first entry)
XX
DE Lung cancer-associated polypeptide #133.
XX
KW Lung cancer-associated polypeptide; cytostatic; emphysema;
KW antiinflammatory; antiasthmatic; non-small cell lung cancer; atelectasis;
KW small cell lung cancer; benign lesion; precancerous lesion; bronchitis;
KW chronic obstructive pulmonary disease; hypersensitivity pneumonitis;
KW interstitial pulmonary fibrosis; fibrosis; asthma; bronchiectasis.
XX
OS Unidentified.
XX
PN WO200286443-A2.
XX
PD 31-OCT-2002.
XX
PF 18-APR-2002; 2002WO-US012476.
XX
PR 18-APR-2001; 2001US-0284770P.
PR 10-MAY-2001; 2001US-0290492P.
PR 09-NOV-2001; 2001US-0339245P.
PR 13-NOV-2001; 2001US-0350666P.
PR 29-NOV-2001; 2001US-0334370P.
PR 12-APR-2002; 2002US-0372246P.
XX
PA (EOSB-) EOS BIOTECHNOLOGY INC.
XX
PI Aziz N, Murray R;
XX
DR WPI; 2003-093161/08.
DR N-PSDB; ABX76267.
XX
PT Detecting a lung cancer-associated transcript in a cell from a patient
PT for treating lung cancer, by contacting a biological sample from the
PT patient with a polynucleotide that exhibits increased or decreased
PT expression in lung cancer.
XX
PS Claim 27; Page 291; 453pp; English.
XX
CC The invention relates to a method for detecting a lung cancer-associated
CC transcript in a cell from a patient, comprising contacting a biological
CC sample from the patient with a polynucleotide that selectively hybridises
CC to a sequence that is at least 80 % identical to a gene that exhibits
CC increased or decreased expression in lung cancer samples. Lung cancer-
CC associated polynucleotides and polypeptides are used for identifying a
CC compound that modulates a lung cancer-associated polypeptide, for
CC inhibiting proliferation of a lung cancer-associated cell to treat lung
CC cancer in a patient and for treating a mammal having lung cancer by
CC administering a modulatory compound identified. The methods are useful
CC for treating lung cancer, such as small cell lung cancer, non-small cell
CC lung cancer or other benign or precancerous lesions, e.g. atelectasis,
CC emphysema, bronchitis, chronic obstructive pulmonary disease, fibrosis,
CC hypersensitivity pneumonitis, interstitial pulmonary fibrosis, asthma and
CC bronchiectasis. The genes, polynucleotides and polypeptides are useful
CC for diagnostic purposes and as targets for screening for therapeutic
CC compounds that modulate lung cancer, such as antibodies. Sequences
CC ABU56408-ABU56745 represent lung cancer-associated polypeptides of the
CC invention
XX
SQ Sequence 220 AA;

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  Query Match             100.0%;  Score 1184;  DB 6;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 2.3e-77;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 15
ABU71444
ID ABU71444 standard; protein; 220 AA.
XX
AC ABU71444;
XX
DT 09-JUN-2003 (first entry)
XX
DE Human neoplasia inhibiting PRO polypeptide PRO3562.
XX
KW Human; tumour; cancer; neoplasia; liver cancer; sarcoma; breast cancer;
KW ovarian cancer; renal cancer; colorectal cancer; melanoma;
KW uterine cancer; prostate cancer; lung cancer; bladder cancer; leukaemia;
KW gastric cancer; pancreatic cancer; vulval cancer; thyroid cancer;
KW central nervous system cancer; hepatic carcinoma; glioblastoma;
KW neuronal disorder; glial disorder; astrocytal disorder;
KW hypothalamic disorder; glandular disorder; macrophagal disorder;
KW epithelial disorder; stromal disorder; blastocoelic disorder;
KW inflammatory disorder; angiogenic disorder; immunologic disorder.
XX
OS Homo sapiens.
XX
PN US2002192209-A1.
XX
PD 19-DEC-2002.
XX
PF 30-NOV-2001; 2001US-00001054.
XX
PR 17-SEP-1997; 97US-0059114P.
PR 27-MAR-1998; 98US-0079689P.
PR 30-MAR-1998; 98US-0079920P.
PR 24-APR-1998; 98US-0082999P.
PR 29-APR-1998; 98US-0083545P.
PR 12-MAY-1998; 98US-0085149P.
PR 02-JUN-1998; 98US-0087607P.
PR 11-JUN-1998; 98US-0088858P.
PR 25-JUN-1998; 98US-0090691P.

PR 17-AUG-1998; 98US-0096891P.
PR 17-AUG-1998; 98US-0096894P.
PR 10-SEP-1998; 98US-0099803P.
PR 10-SEP-1998; 98WO-US018824.
PR 14-SEP-1998; 98US-0100263P.
PR 15-SEP-1998; 98US-0100390P.
PR 23-SEP-1998; 98US-0101476P.
PR 10-NOV-1998; 98US-0107783P.
PR 18-NOV-1998; 98US-0108849P.
PR 19-NOV-1998; 98US-00180997.
PR 15-DEC-1998; 98US-0112420P.
PR 22-DEC-1998; 98US-00218517.
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PR 05-JAN-1999; 99WO-US000106.
PR 12-JAN-1999; 99US-0115554P.
PR 12-JAN-1999; 99US-0115558P.
PR 20-JAN-1999; 99US-0116533P.
PR 08-MAR-1999; 99WO-US005028.
PR 10-MAR-1999; 99US-0123618P.
PR 12-APR-1999; 99US-00284291.
PR 20-APR-1999; 99WO-US008615.
PR 27-APR-1999; 99US-0131294P.
PR 02-JUN-1999; 99WO-US012252.
PR 22-JUN-1999; 99US-0140650P.
PR 23-JUN-1999; 99US-0141037P.
PR 20-JUL-1999; 99US-0144758P.
PR 25-AUG-1999; 99US-00380137.
PR 25-AUG-1999; 99US-00380138.
PR 01-SEP-1999; 99WO-US020111.
PR 08-SEP-1999; 99WO-US020594.
PR 09-SEP-1999; 99US-00380913.
PR 18-OCT-1999; 99US-00403297.
PR 29-OCT-1999; 99US-0162506P.
PR 10-NOV-1999; 99US-00423741.
PR 30-NOV-1999; 99WO-US028313.
PR 01-DEC-1999; 99WO-US028634.
PR 02-DEC-1999; 99WO-US028551.
PR 09-DEC-1999; 99US-0170262P.
PR 16-DEC-1999; 99WO-US030095.
PR 20-DEC-1999; 99WO-US030999.
PR 06-JAN-2000; 2000WO-US000376.
PR 11-FEB-2000; 2000WO-US003565.
PR 18-FEB-2000; 2000WO-US004341.
PR 18-FEB-2000; 2000WO-US004342.
PR 02-MAR-2000; 2000WO-US005841.
PR 03-MAR-2000; 2000US-0187202P.
PR 15-MAR-2000; 2000WO-US006884.
PR 30-MAR-2000; 2000WO-US008439.
PR 17-MAY-2000; 2000WO-US013705.
PR 22-MAY-2000; 2000WO-US014042.
PR 30-MAY-2000; 2000WO-US014941.
PR 02-JUN-2000; 2000WO-US015264.
PR 11-AUG-2000; 2000WO-US022031.
PR 23-AUG-2000; 2000WO-US023522.
PR 08-NOV-2000; 2000US-00709238.
PR 10-NOV-2000; 2000WO-US030873.
PR 01-DEC-2000; 2000WO-US032678.
PR 28-FEB-2001; 2001WO-US006520.
PR 01-MAR-2001; 2001WO-US006666.
PR 09-MAR-2001; 2001US-00802706.
PR 25-MAY-2001; 2001US-00866034.
PR 25-MAY-2001; 2001WO-US017092.
PR 01-JUN-2001; 2001US-00872034.
PR 01-JUN-2001; 2001US-00872035.
PR 01-JUN-2001; 2001WO-US017800.
PR 14-JUN-2001; 2001US-00882636.
PR 20-JUN-2001; 2001WO-US019692.
PR 29-JUN-2001; 2001WO-US021066.
PR 09-JUL-2001; 2001WO-US021735.
PR 30-JUL-2001; 2001US-00918585.
PR 06-AUG-2001; 2001US-00924419.
PR 09-AUG-2001; 2001US-00927796.
PR 13-AUG-2001; 2001US-00929404.
PR 28-AUG-2001; 2001US-00941992.
PR 29-AUG-2001; 2001WO-US027099.
PR 04-SEP-2001; 2001US-00946374.
XX
PA (GETH) GENENTECH INC.
XX
PI Baker KP, Goddard A, Gurney AL, Hebert C, Henzel W, Kabakoff RC;
PI Shelton DL, Smith V, Watanabe CK, Wood WI;
XX
DR WPI; 2003-328851/06.
DR N-PSDB; ACA58017.
XX
PT Novel isolated PRO polypeptides e.g. PRO240, PRO381, PRO540, useful for
PT treating tumor, preferably cancer, or for treating neuronal, glial,
PT hypothalamic, stromal, inflammatory, angiogenic and immunologic
PT disorders.
XX
PS Claim 32; Fig 56; 186pp; English.
XX
CC The invention relates to an isolated secreted and transmembrane
CC polypeptide, designated as PRO polypeptide, PRO polypeptide lacking its
CC associated signal peptide or PRO polypeptide extracellular domain with or
CC without its associated signal peptide. The PRO polypeptide or an antibody
CC binding to it is useful for inhibiting the growth of a tumor cell. A
CC composition containing a PRO polypeptide is useful for inhibiting
CC neoplastic cell growth or for treating a tumour, preferably cancer (such
CC as liver, breast, ovarian, renal, colorectal, uterine, prostate, lung,
CC bladder, gastric, pancreatic, vulval, thyroid, central nervous system
CC cancer, hepatic carcinomas, sarcomas, glioblastomas, melanoma or
CC leukaemia) in a mammal. The PRO polypeptide is useful for identifying its
CC agonists. The PRO polypeptide or an antibody binding to it is useful in
CC the preparation of a medicament for treating a condition which is
CC responsive to the PRO polypeptide or an antibody binding to it. The PRO
CC polypeptide or an antibody binding to it is also useful for treating
CC neuronal, glial, astrocytal, hypothalamic, glandular, macrophagal,
CC epithelial, stromal, blastocoelic, inflammatory, angiogenic and
CC immunologic disorders. The present sequence represents the amino acid
CC sequence of a PRO polypeptide of the invention
XX
SQ Sequence 220 AA;

Query Match 100.0%; Score 1184; DB 6; Length 220;
Best Local Similarity 100.0%; Pred. No. 2.3e-77;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
Db 1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
Db 61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
Db 121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
Db 181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220

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Job time : 99.0392 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

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(without alignments)
543.872 Million cell updates/sec

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Perfect score: 1184
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 220

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Gapop 10.0 , Gapext 0.5

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Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	1184	100.0	220	4	US-09-347-613C-9	Sequence 9, Appli
3	1184	100.0	220	4	US-09-347-613C-35	Sequence 35, Appl
4	1184	100.0	220	4	US-09-662-183A-9	Sequence 9, Appli
5	1184	100.0	220	4	US-09-662-183A-35	Sequence 35, Appl
6	1075	90.8	237	3	US-09-220-528-32	Sequence 32, Appl
7	1062	89.7	237	4	US-09-347-613C-4	Sequence 4, Appli
8	1062	89.7	237	4	US-09-662-183A-4	Sequence 4, Appli
9	979	82.7	181	3	US-09-220-528-40	Sequence 40, Appl
10	868.5	73.4	200	4	US-09-347-613C-2	Sequence 2, Appli
11	868.5	73.4	200	4	US-09-662-183A-2	Sequence 2, Appli
12	862	72.8	224	3	US-09-220-528-29	Sequence 29, Appl
13	862	72.8	224	4	US-09-347-613C-16	Sequence 16, Appl
14	862	72.8	224	4	US-09-662-183A-16	Sequence 16, Appl
15	846	71.5	159	3	US-09-220-528-12	Sequence 12, Appl
16	846	71.5	159	3	US-09-220-528-89	Sequence 89, Appl
17	754	63.7	140	3	US-09-220-528-5	Sequence 5, Appli
18	754	63.7	140	4	US-09-347-613C-10	Sequence 10, Appl
19	754	63.7	140	4	US-09-662-183A-10	Sequence 10, Appl
20	745	62.9	185	3	US-09-220-528-41	Sequence 41, Appl
21	742	62.7	140	4	US-09-347-613C-5	Sequence 5, Appli
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23	622	52.5	144	3	US-09-220-528-36	Sequence 36, Appl
24	614	51.9	116	3	US-09-220-528-4	Sequence 4, Appli
25	614	51.9	116	4	US-09-347-613C-11	Sequence 11, Appl
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27	602	50.8	116	4	US-09-347-613C-6	Sequence 6, Appli
28	602	50.8	116	4	US-09-662-183A-6	Sequence 6, Appli
29	601	50.8	113	3	US-09-220-528-3	Sequence 3, Appli
30	601	50.8	113	4	US-09-347-613C-12	Sequence 12, Appl
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34	583	49.2	107	3	US-09-220-528-52	Sequence 52, Appl
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36	528	44.6	113	3	US-09-220-528-34	Sequence 34, Appl
37	515	43.5	96	3	US-09-220-528-19	Sequence 19, Appl
38	480	40.5	96	3	US-09-220-528-33	Sequence 33, Appl
39	458	38.7	90	3	US-09-220-528-75	Sequence 75, Appl
40	378	31.9	68	3	US-09-220-528-50	Sequence 50, Appl
41	334	28.2	111	3	US-09-220-528-53	Sequence 53, Appl
42	253	21.4	197	1	US-08-519-777-7	Sequence 7, Appli
43	253	21.4	197	1	US-08-742-035-7	Sequence 7, Appli
44	253	21.4	197	2	US-08-777-019-7	Sequence 7, Appli
45	253	21.4	197	2	US-08-777-143-7	Sequence 7, Appli

ALIGNMENTS

RESULT 1
US-09-220-528-26
; Sequence 26, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
; FILE REFERENCE: 6029-7998
; CURRENT APPLICATION NUMBER: US/09/220,528A
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-26

Query Match 100.0%; Score 1184; DB 3; Length 220;
Best Local Similarity 100.0%; Pred. No. 5.5e-83;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 2
US-09-347-613C-9
; Sequence 9, Application US/09347613C
; Patent No. 6593133

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; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-9

  Query Match             100.0%;  Score 1184;  DB 4;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 5.5e-83;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 3
US-09-347-613C-35
; Sequence 35, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 35
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-35

  Query Match             100.0%;  Score 1184;  DB 4;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 5.5e-83;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 4
US-09-662-183A-9
; Sequence 9, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-662-183A-9

  Query Match             100.0%;  Score 1184;  DB 4;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 5.5e-83;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;
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Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
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Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 5
US-09-662-183A-35
; Sequence 35, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; APPLICANT: Blom, Nikolaj
; APPLICANT: Hansen, Claus
; TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
; FILE REFERENCE: 19313-001 DIV
; CURRENT APPLICATION NUMBER: US/09/662,183A
; CURRENT FILING DATE: 2000-09-14
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: DANISH 1998 01260
; PRIOR FILING DATE: 1998-10-05
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06
; PRIOR APPLICATION NUMBER: 09/347,613
; PRIOR FILING DATE: 2000-07-02
; NUMBER OF SEQ ID NOS: 43
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 35
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-662-183A-35

Query Match 100.0%; Score 1184; DB 4; Length 220;
Best Local Similarity 100.0%; Pred. No. 5.5e-83;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
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Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 6
US-09-220-528-32
; Sequence 32, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
; FILE REFERENCE: 6029-7998
; CURRENT APPLICATION NUMBER: US/09/220,528A
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 32
; LENGTH: 237
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-528-32

Query Match 90.8%; Score 1075; DB 3; Length 237;
Best Local Similarity 100.0%; Pred. No. 1.2e-74;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db         37 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 96

Qy         80 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 139
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Db         97 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 156

Qy        140 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 199
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Db        157 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 216

Qy        200 DVNSTWRTVDRLSATACGCLG 220
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Db        217 DVNSTWRTVDRLSATACGCLG 237
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RESULT 7
US-09-347-613C-4
; Sequence 4, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
; APPLICANT: Johansen, Teit E.
; APPLICANT: Blom, Nikolaj
; APPLICANT: Hansen, Claus
; TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
; FILE REFERENCE: NeuroSearch 19313-001
; CURRENT APPLICATION NUMBER: US/09/347,613C
; CURRENT FILING DATE: 1999-07-02
; PRIOR APPLICATION NUMBER: DANISH 1998 00904
; PRIOR FILING DATE: 1998-07-06
; PRIOR APPLICATION NUMBER: USSN 60/092,229
; PRIOR FILING DATE: 1998-07-09
; PRIOR APPLICATION NUMBER: DANISH 1998 01048
; PRIOR FILING DATE: 1998-08-19
; PRIOR APPLICATION NUMBER: USSN 60/097,774
; PRIOR FILING DATE: 1998-08-25
; PRIOR APPLICATION NUMBER: DANISH 1998 01260
; PRIOR FILING DATE: 1998-10-05
; PRIOR APPLICATION NUMBER: USSN 60/103,908
; PRIOR FILING DATE: 1998-10-13
; PRIOR APPLICATION NUMBER: DANISH 1998 01265
; PRIOR FILING DATE: 1998-10-06

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;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
;   LENGTH: 237
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-4

  Query Match             89.7%;  Score 1062;  DB 4;  Length 237;
  Best Local Similarity   98.5%;  Pred. No. 1.2e-73;
  Matches  198;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          20 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 79
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Db          37 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 96

Qy          80 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 139
               ||||||||||||||||||||||||||||||:||||||||||||||||||||||||||||
Db          97 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGNRARAAGARGCRLRSQLVPVRALGLGH 156

Qy         140 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 199
               |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         157 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 216

Qy         200 DVNSTWRTVDRLSATACGCLG 220
               |||||||||||||||  |||||
Db         217 DVNSTWRTVDRLSANPCGCLG 237


RESULT 8
US-09-662-183A-4
; Sequence 4, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
;   LENGTH: 237
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-662-183A-4

  Query Match             89.7%;  Score 1062;  DB 4;  Length 237;
  Best Local Similarity   98.5%;  Pred. No. 1.2e-73;
  Matches  198;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy          20 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 79
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Db          37 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 96

Qy          80 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 139
               ||||||||||||||||||||||||||||||:||||||||||||||||||||||||||||
Db          97 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGNRARAAGARGCRLRSQLVPVRALGLGH 156

Qy         140 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 199
               |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         157 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 216

Qy         200 DVNSTWRTVDRLSATACGCLG 220
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Db         217 DVNSTWRTVDRLSANPCGCLG 237


RESULT 9
US-09-220-528-40
; Sequence 40, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 40
;   LENGTH: 181
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-528-40

  Query Match             82.7%;  Score 979;  DB 3;  Length 181;
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  Matches  181;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          40 SLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSAL 99
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Db           1 SLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSAL 60

Qy         100 PRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARS 159
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Db          61 PRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARS 120

Qy         160 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 219
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Db         121 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 180

Qy         220 G 220
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Db         181 G 181


RESULT 10
US-09-347-613C-2
; Sequence 2, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
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;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 200
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-347-613C-2

  Query Match            73.4%;  Score 868.5;  DB 4;  Length 200;
  Best Local Similarity  86.1%;  Pred. No. 5.2e-59;
  Matches  173;  Conservative    6;  Mismatches   19;  Indels    3;  Gaps    3;

Qy         21 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 80
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          2 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 61

Qy         81 PPPQP-SRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 139
              |  :  |  ||    |  : ||  |||| ||  :|: : || ||||||||||||||||||
Db         62 PRRRHFSARAPAACTPICSSPR-VRAARLGGRAARSGSGGA-GCRLRSQLVPVRALGLGH 119

Qy        140 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 199
              ||||||||||:||| ||||||||||||||||||||||||||||||||||||||||||||
Db        120 RSDELVRFRFCTGSCPRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 179

Qy        200 DVNSTWRTVDRLSATACGCLG 220
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Db        180 DVNSTWRTVDRLSATACGCLG 200


RESULT 11
US-09-662-183A-2
; Sequence 2, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 2
;   LENGTH: 200
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-662-183A-2

  Query Match            73.4%;  Score 868.5;  DB 4;  Length 200;
  Best Local Similarity  86.1%;  Pred. No. 5.2e-59;
  Matches  173;  Conservative    6;  Mismatches   19;  Indels    3;  Gaps    3;

Qy         21 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 80
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Db          2 PALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARR 61

Qy         81 PPPQP-SRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 139
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Db         62 PRRRHFSARAPAACTPICSSPR-VRAARLGGRAARSGSGGA-GCRLRSQLVPVRALGLGH 119

Qy        140 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 199
              ||||||||||:||| ||||||||||||||||||||||||||||||||||||||||||||
Db        120 RSDELVRFRFCTGSCPRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 179

Qy        200 DVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||
Db        180 DVNSTWRTVDRLSATACGCLG 200


RESULT 12
US-09-220-528-29
; Sequence 29, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 29
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: MURINE
US-09-220-528-29

  Query Match            72.8%;  Score 862;  DB 3;  Length 224;
  Best Local Similarity  75.9%;  Pred. No. 1.8e-58;
  Matches  170;  Conservative    5;  Mismatches   45;  Indels    4;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              |||||   : ||||  || | | ||||| ||||| | ||||    |||| |:|| ||||
Db          1 MELGLAEPTALSHCLRPRWQSAWWPTLAVLALLSCVTEASLDPMSRSPAARDGPSPVLAP 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRAR 116
              |  ||||| ||  || |  |||||  :|||||| |    | |  || |||||||   ||||
Db         61 PTDHLPGGHTAHLCSERTLRPPPQSPQPAPPPPGPALQSPPAALRGARAARAGTRSSRAR 120

Qy        117 AAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRP 176
              |||||||||||||| |||||| ||||:||||||||||||| ||||||||||||||||||
Db        121 TTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLASLLGAGALRS 180

Qy        177 PPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||:|||||||||||||||||||||||| ||||||||||
Db        181 PPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 13
US-09-347-613C-16
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; Sequence 16, Application US/09347613C
; Patent No. 6593133
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6593133el Neurotrophic Factors
;  FILE REFERENCE: NeuroSearch 19313-001
;  CURRENT APPLICATION NUMBER: US/09/347,613C
;  CURRENT FILING DATE:  1999-07-02
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: Murinae gen. sp.
US-09-347-613C-16

  Query Match             72.8%;  Score 862;  DB 4;  Length 224;
  Best Local Similarity   75.9%;  Pred. No. 1.8e-58;
  Matches  170;  Conservative    5;  Mismatches   45;  Indels    4;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              |||||   : ||||  || | | ||||| ||||| | ||||    |||| |:|| ||||
Db          1 MELGLAEPTALSHCLRPRWQSAWWPTLAVLALLSCVTEASLDPMSRSPAARDGPSPVLAP 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRAR 116
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Qy        117 AAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRP 176
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Qy        177 PPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 PPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 14
US-09-662-183A-16
; Sequence 16, Application US/09662183A
; Patent No. 6734284
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Blom, Nikolaj
;  APPLICANT:  Hansen, Claus
;  TITLE OF INVENTION: No. 6734284el Neurotrophic Factors
;  FILE REFERENCE: 19313-001 DIV
;  CURRENT APPLICATION NUMBER: US/09/662,183A
;  CURRENT FILING DATE:  2000-09-14
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: DANISH  1998 01260
;  PRIOR FILING DATE: 1998-10-05
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: 09/347,613
;  PRIOR FILING DATE: 2000-07-02
;  NUMBER OF SEQ ID NOS: 43
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
;   LENGTH: 224
;   TYPE: PRT
;   ORGANISM: Murinae gen. sp.
US-09-662-183A-16

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  Best Local Similarity   75.9%;  Pred. No. 1.8e-58;
  Matches  170;  Conservative    5;  Mismatches   45;  Indels    4;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Qy        117 AAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRP 176
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Db        121 TTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLASLLGAGALRS 180

Qy        177 PPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 PPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


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; Sequence 12, Application US/09220528A
; Patent No. 6284540
; GENERAL INFORMATION:
;  APPLICANT: Milbrandt, Jeffrey D.
;  APPLICANT: Baloh, Robert H.
;  TITLE OF INVENTION: Artemin, A No. 6284540el Neurotrophic Factor
;  FILE REFERENCE: 6029-7998
;  CURRENT APPLICATION NUMBER: US/09/220,528A
;  CURRENT FILING DATE: 1998-12-24
;  EARLIER APPLICATION NUMBER: 09/218,698
;  EARLIER FILING DATE: 1998-12-22
;  EARLIER APPLICATION NUMBER: 60/108,148
;  EARLIER FILING DATE: 1998-11-12
;  EARLIER APPLICATION NUMBER: 09/163,283
;  EARLIER FILING DATE: 1998-09-29
;  NUMBER OF SEQ ID NOS: 120
;  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 12
;   LENGTH: 159
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-220-528-12

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GenCore version 5.1.6

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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1	1184	100.0	220	9	US-09-220-920-26	Sequence 26, Appl
2	1184	100.0	220	9	US-09-804-615-9	Sequence 9, Appli
3	1184	100.0	220	13	US-10-001-054-56	Sequence 56, Appl
4	1184	100.0	220	14	US-10-223-085-318	Sequence 318, App
5	1184	100.0	220	14	US-10-223-084-318	Sequence 318, App
6	1184	100.0	220	14	US-10-223-088-318	Sequence 318, App
7	1184	100.0	220	14	US-10-223-090-318	Sequence 318, App
8	1184	100.0	220	14	US-10-223-087-318	Sequence 318, App
9	1184	100.0	220	14	US-10-223-083-318	Sequence 318, App
10	1184	100.0	220	14	US-10-223-089-318	Sequence 318, App
11	1184	100.0	220	14	US-10-210-951-62	Sequence 62, Appl
12	1184	100.0	220	14	US-10-211-884-62	Sequence 62, Appl
13	1184	100.0	220	14	US-10-223-081-318	Sequence 318, App
14	1184	100.0	220	14	US-10-223-082-318	Sequence 318, App
15	1184	100.0	220	15	US-10-211-858-62	Sequence 62, Appl
16	1184	100.0	220	15	US-10-305-654-318	Sequence 318, App
17	1184	100.0	220	15	US-10-295-027-402	Sequence 402, App
18	1184	100.0	220	15	US-10-295-027-404	Sequence 404, App
19	1184	100.0	220	15	US-10-081-056-318	Sequence 318, App
20	1184	100.0	220	15	US-10-669-853-2	Sequence 2, Appli
21	1184	100.0	220	16	US-10-661-984A-9	Sequence 9, Appli
22	1170	98.8	228	15	US-10-295-027-408	Sequence 408, App
23	1075	90.8	237	9	US-09-220-920-32	Sequence 32, Appl
24	1075	90.8	237	15	US-10-295-027-406	Sequence 406, App
25	1075	90.8	238	9	US-09-813-398-40	Sequence 40, Appl
26	1062	89.7	237	9	US-09-804-615-4	Sequence 4, Appli
27	1062	89.7	237	16	US-10-661-984A-4	Sequence 4, Appli
28	979	82.7	181	9	US-09-220-920-40	Sequence 40, Appl
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30	892	75.3	224	15	US-10-669-853-5	Sequence 5, Appli
31	892	75.3	224	16	US-10-661-984A-34	Sequence 34, Appl
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33	868.5	73.4	200	16	US-10-661-984A-2	Sequence 2, Appli
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35	862	72.8	224	9	US-09-804-615-16	Sequence 16, Appl
36	862	72.8	224	15	US-10-669-853-4	Sequence 4, Appli
37	862	72.8	224	16	US-10-661-984A-16	Sequence 16, Appl
38	846	71.5	159	9	US-09-220-920-12	Sequence 12, Appl
39	846	71.5	159	9	US-09-220-920-89	Sequence 89, Appl
40	754	63.7	140	9	US-09-220-920-5	Sequence 5, Appli
41	754	63.7	140	9	US-09-804-615-10	Sequence 10, Appl
42	754	63.7	140	15	US-10-669-853-11	Sequence 11, Appl
43	754	63.7	140	16	US-10-661-984A-10	Sequence 10, Appl
44	745	62.9	185	9	US-09-220-920-41	Sequence 41, Appl
45	742	62.7	140	9	US-09-804-615-5	Sequence 5, Appli

ALIGNMENTS

RESULT 1
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; Sequence 26, Application US/09220920
; Patent No. US20020002269A1
; GENERAL INFORMATION:
; APPLICANT: Milbrandt, Jeffrey D.
; APPLICANT: Baloh, Robert H.
; TITLE OF INVENTION: Artemin, A No. US20020002269A1el Neurotrophic Factor
; FILE REFERENCE: 6029-7996
; CURRENT APPLICATION NUMBER: US/09/220,920
; CURRENT FILING DATE: 1998-12-24
; EARLIER APPLICATION NUMBER: 09/163,283
; EARLIER FILING DATE: 1998-09-29
; EARLIER APPLICATION NUMBER: 60/108,148
; EARLIER FILING DATE: 1998-11-12
; EARLIER APPLICATION NUMBER: 09/218,698
; EARLIER FILING DATE: 1998-12-22
; NUMBER OF SEQ ID NOS: 120
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 26
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-09-220-920-26

Query Match 100.0%; Score 1184; DB 9; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 2
US-09-804-615-9
; Sequence 9, Application US/09804615
; Patent No. US20020055467A1
; GENERAL INFORMATION:
;  APPLICANT: Johansen, Teit E.
;  APPLICANT:  Wen-Yee Saw, Dinah
;  TITLE OF INVENTION: No. US20020055467A1el Neurotrophic Factors
;  FILE REFERENCE: No. US20020055467A1el Neurotrophic Factors
;  CURRENT APPLICATION NUMBER: US/09/804,615
;  CURRENT FILING DATE:  2001-03-12
;  PRIOR APPLICATION NUMBER: DANISH  1998 00904
;  PRIOR FILING DATE: 1998-07-06
;  PRIOR APPLICATION NUMBER: USSN 60/092,229
;  PRIOR FILING DATE: 1998-07-09
;  PRIOR APPLICATION NUMBER: DANISH  1998 01048
;  PRIOR FILING DATE: 1998-08-19
;  PRIOR APPLICATION NUMBER: USSN 60/097,774
;  PRIOR FILING DATE: 1998-08-25
;  PRIOR APPLICATION NUMBER: USSN 60/103,908
;  PRIOR FILING DATE: 1998-10-13
;  PRIOR APPLICATION NUMBER: DANISH  1998 01265
;  PRIOR FILING DATE: 1998-10-06
;  PRIOR APPLICATION NUMBER: U.S.S.N 09/347,613
;  PRIOR FILING DATE: 1999-07-02
;  NUMBER OF SEQ ID NOS: 40
;  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 9
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-09-804-615-9

  Query Match             100.0%;  Score 1184;  DB 9;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
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Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 3
US-10-001-054-56
; Sequence 56, Application US/10001054
; Publication No. US20020192209A1
; GENERAL INFORMATION:
;  APPLICANT: Genentech, Inc.
;  APPLICANT:  Baker, Kevin
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Gurney,Austin
;  APPLICANT:  Hebert,Carolyn
;  APPLICANT:  Henzel,William
;  APPLICANT:  Kabakoff,Rhona
;  APPLICANT:  Shelton,David
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Watanabe,Colin
;  APPLICANT:  Wood, William
;  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR INHIBITING NEOPLASTIC
;  TITLE OF INVENTION:  CELL GROWTH
;  FILE REFERENCE: P3034R1PCT
;  CURRENT APPLICATION NUMBER: US/10/001,054
;  CURRENT FILING DATE:  2001-11-30
;  PRIOR APPLICATION NUMBER: 60/059114
;  PRIOR FILING DATE: 1997-09-17
;  PRIOR APPLICATION NUMBER: 60/079689
;  PRIOR FILING DATE: 1998-03-27
;  PRIOR APPLICATION NUMBER: 60/079920
;  PRIOR FILING DATE: 1998-03-30
;  PRIOR APPLICATION NUMBER: 60/082999
;  PRIOR FILING DATE: 1998-04-24
;  PRIOR APPLICATION NUMBER: 60/083545
;  PRIOR FILING DATE: 1998-04-29
;  PRIOR APPLICATION NUMBER: 60/085149
;  PRIOR FILING DATE: 1998-05-12
;  PRIOR APPLICATION NUMBER: 60/087607
;  PRIOR FILING DATE: 1998-06-02
;  PRIOR APPLICATION NUMBER: 60/088858
;  PRIOR FILING DATE: 1998-06-11
;  PRIOR APPLICATION NUMBER: 60/090691
;  PRIOR FILING DATE: 1998-06-25
;  PRIOR APPLICATION NUMBER: 60/096891
;  PRIOR FILING DATE: 1998-08-17
;  PRIOR APPLICATION NUMBER: 60/096894
;  PRIOR FILING DATE: 1998-08-17
;  PRIOR APPLICATION NUMBER: 60/099803
;  PRIOR FILING DATE: 1998-09-10
;  PRIOR APPLICATION NUMBER: 60/100263
;  PRIOR FILING DATE: 1998-09-14
;  PRIOR APPLICATION NUMBER: 60/100390
;  PRIOR FILING DATE: 1998-09-15
;  PRIOR APPLICATION NUMBER: 60/101476
;  PRIOR FILING DATE: 1998-09-23
;  PRIOR APPLICATION NUMBER: 60/107783
;  PRIOR FILING DATE: 1998-11-10
;  PRIOR APPLICATION NUMBER: 60/108849
;  PRIOR FILING DATE: 1998-11-18
;  PRIOR APPLICATION NUMBER: 60/112420
;  PRIOR FILING DATE: 1998-12-15
;  PRIOR APPLICATION NUMBER: 60/113296
;  PRIOR FILING DATE: 1998-12-22
;  PRIOR APPLICATION NUMBER: 60/115554
;  PRIOR FILING DATE: 1999-01-12
;  PRIOR APPLICATION NUMBER: 60/115558
;  PRIOR FILING DATE: 1999-01-12
;  PRIOR APPLICATION NUMBER: 60/116533
;  PRIOR FILING DATE: 1999-01-20
;  PRIOR APPLICATION NUMBER: 60/123618
;  PRIOR FILING DATE: 1999-03-10
;  PRIOR APPLICATION NUMBER: 60/131294
;  PRIOR FILING DATE: 1999-04-07
;  PRIOR APPLICATION NUMBER: 60/140650
;  PRIOR FILING DATE: 1999-06-22
;  PRIOR APPLICATION NUMBER: 60/141037
;  PRIOR FILING DATE: 1999-06-23
;  PRIOR APPLICATION NUMBER: 60/144758
;  PRIOR FILING DATE: 1999-07-20
;  PRIOR APPLICATION NUMBER: 60/162506
;  PRIOR FILING DATE: 1999-10-29
;  PRIOR APPLICATION NUMBER: 60/170262
;  PRIOR FILING DATE: 1999-12-09
;  PRIOR APPLICATION NUMBER: 60/187202
;  PRIOR FILING DATE: 2000-03-03
;  PRIOR APPLICATION NUMBER: 60/209832
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; PRIOR FILING DATE: 2000-06-05
; PRIOR APPLICATION NUMBER: 60/232887
; PRIOR FILING DATE: 2000-09-15
; PRIOR APPLICATION NUMBER: 09/180997
; PRIOR FILING DATE: 1998-11-19
; PRIOR APPLICATION NUMBER: 09/218517
; PRIOR FILING DATE: 1998-12-22
; PRIOR APPLICATION NUMBER: 09/284291
; PRIOR FILING DATE: 1999-04-12
; PRIOR APPLICATION NUMBER: 09/380137
; PRIOR FILING DATE: 1999-08-25
; PRIOR APPLICATION NUMBER: 09/380138
; PRIOR FILING DATE: 1999-08-25
; PRIOR APPLICATION NUMBER: 09/380913
; PRIOR FILING DATE: 1999-09-09
; PRIOR APPLICATION NUMBER: 09/403297
; PRIOR FILING DATE: 1999-10-18
; PRIOR APPLICATION NUMBER: 09/423741
; PRIOR FILING DATE: 1999-11-10
; PRIOR APPLICATION NUMBER: 09/709238
; PRIOR FILING DATE: 2000-11-08
; PRIOR APPLICATION NUMBER: 09/802706
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: 09/866034
; PRIOR FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: 09/872035
; PRIOR FILING DATE: 2001-06-01
; PRIOR APPLICATION NUMBER: 09/882636
; PRIOR FILING DATE: 2001-06-14
; PRIOR APPLICATION NUMBER: 09/918585
; PRIOR FILING DATE: 2001-07-30
; PRIOR APPLICATION NUMBER: 09/924419
; PRIOR FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/927796
; PRIOR FILING DATE: 2001-08-06
; PRIOR APPLICATION NUMBER: 09/929404
; PRIOR FILING DATE: 2001-08-13
; PRIOR APPLICATION NUMBER: 09/941992
; PRIOR FILING DATE: 2001-08-28
; PRIOR APPLICATION NUMBER: 09/946374
; PRIOR FILING DATE: 2001-09-04
; PRIOR APPLICATION NUMBER: PCT/US98/18824
; PRIOR FILING DATE: 1998-09-10
; PRIOR APPLICATION NUMBER: PCT/US99/00106
; PRIOR FILING DATE: 1999-01-05
; PRIOR APPLICATION NUMBER: PCT/US99/05028
; PRIOR FILING DATE: 1999-03-08
; PRIOR APPLICATION NUMBER: PCT/US99/08615
; PRIOR FILING DATE: 1999-04-20
; PRIOR APPLICATION NUMBER: PCT/US99/12252
; PRIOR FILING DATE: 1999-06-02
; PRIOR APPLICATION NUMBER: PCT/US99/20111
; PRIOR FILING DATE: 1999-09-01
; PRIOR APPLICATION NUMBER: PCT/US99/20594
; PRIOR FILING DATE: 1999-09-08
; PRIOR APPLICATION NUMBER: PCT/US99/28313
; PRIOR FILING DATE: 1999-11-30
; PRIOR APPLICATION NUMBER: PCT/US99/28551
; PRIOR FILING DATE: 1999-12-02
; PRIOR APPLICATION NUMBER: PCT/US99/28634
; PRIOR FILING DATE: 1999-12-01
; PRIOR APPLICATION NUMBER: PCT/US99/30095
; PRIOR FILING DATE: 1999-12-16
; PRIOR APPLICATION NUMBER: PCT/US99/30999
; PRIOR FILING DATE: 1999-12-20
; PRIOR APPLICATION NUMBER: PCT/US00/00376
; PRIOR FILING DATE: 2000-01-06
; PRIOR APPLICATION NUMBER: PCT/US00/03565
; PRIOR FILING DATE: 2000-02-11
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; PRIOR FILING DATE: 2000-02-18
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; PRIOR FILING DATE: 2000-03-02
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; PRIOR FILING DATE: 2000-03-15
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; PRIOR FILING DATE: 2000-03-30
; PRIOR APPLICATION NUMBER: PCT/US00/13705
; PRIOR FILING DATE: 2000-05-17
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; PRIOR FILING DATE: 2000-05-22
; PRIOR APPLICATION NUMBER: PCT/US00/14941
; PRIOR FILING DATE: 2000-05-30
; PRIOR APPLICATION NUMBER: PCT/US00/15264
; PRIOR FILING DATE: 2000-06-02
; PRIOR APPLICATION NUMBER: PCT/US00/22031
; PRIOR FILING DATE: 2000-08-11
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/30873
; PRIOR FILING DATE: 2000-11-10
; PRIOR APPLICATION NUMBER: PCT/US00/32678
; PRIOR FILING DATE: 2000-12-01
; PRIOR APPLICATION NUMBER: PCT/US01/06520
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: PCT/US01/06666
; PRIOR FILING DATE: 2001-03-01
; PRIOR APPLICATION NUMBER: PCT/US01/17092
; PRIOR FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: PCT/US01/17800
; PRIOR FILING DATE: 2001-06-01
; PRIOR APPLICATION NUMBER: PCT/US01/19692
; PRIOR FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: PCT/US01/21066
; PRIOR FILING DATE: 2001-06-29
; PRIOR APPLICATION NUMBER: PCT/US01/21735
; PRIOR FILING DATE: 2001-07-09
; PRIOR APPLICATION NUMBER: PCT/US01/27099
; PRIOR FILING DATE: 2001-08-29
; NUMBER OF SEQ ID NOS: 91
; SEQ ID NO 56
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo Sapien
US-10-001-054-56

Query Match 100.0%; Score 1184; DB 13; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
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Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 4
US-10-223-085-318
; Sequence 318, Application US/10223085
; Publication No. US20030100497A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone

```
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C10
;  CURRENT APPLICATION NUMBER: US/10/223,085
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-085-318

  Query Match             100.0%;  Score 1184;  DB 14;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
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Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 5
US-10-223-084-318
; Sequence 318, Application US/10223084
; Publication No. US20030105011A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
```

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;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C5
;  CURRENT APPLICATION NUMBER: US/10/223,084
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-084-318

  Query Match             100.0%;  Score 1184;  DB 14;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
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Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
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Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
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Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 6
US-10-223-088-318
; Sequence 318, Application US/10223088
; Publication No. US20030105012A1
; GENERAL INFORMATION:
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;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C6
;  CURRENT APPLICATION NUMBER: US/10/223,088
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-088-318

  Query Match           100.0%;  Score 1184;  DB 14;  Length 220;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 7
US-10-223-090-318
; Sequence 318, Application US/10223090
; Publication No. US20030105013A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
;  APPLICANT:  Williams, P.Mickey
;  APPLICANT:  Ye, Weilan
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
;  TITLE OF INVENTION:  TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
;  FILE REFERENCE: P3235P1C2
;  CURRENT APPLICATION NUMBER: US/10/223,090
;  CURRENT FILING DATE:  2002-08-16
;  PRIOR APPLICATION NUMBER: US 10/081,056
;  PRIOR FILING DATE: 2002-02-20
;  PRIOR APPLICATION NUMBER: US 60/213,637
;  PRIOR FILING DATE: 2000-06-23
;  PRIOR APPLICATION NUMBER: US 60/219,556
;  PRIOR FILING DATE: 2000-07-20
;  PRIOR APPLICATION NUMBER: US 60/220,624
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: US 60/220,664
;  PRIOR FILING DATE: 2000-07-25
;  PRIOR APPLICATION NUMBER: PCT/US00/20710
;  PRIOR FILING DATE: 2000-07-28
;  PRIOR APPLICATION NUMBER: US 60/222,695
;  PRIOR FILING DATE: 2000-08-02
;  PRIOR APPLICATION NUMBER: US 09/643,657
;  PRIOR FILING DATE: 2000-08-17
;  PRIOR APPLICATION NUMBER: PCT/US00/23522
;  PRIOR FILING DATE: 2000-08-23
;  PRIOR APPLICATION NUMBER: PCT/US00/23328
;  PRIOR FILING DATE: 2000-08-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-223-090-318

  Query Match           100.0%;  Score 1184;  DB 14;  Length 220;
  Best Local Similarity  100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 8
US-10-223-087-318
; Sequence 318, Application US/10223087
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; Publication No. US20030109438A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Marsters, Scot A.
; APPLICANT: Pan, James
; APPLICANT: Stephan, Jean-Philippe F.
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
; TITLE OF INVENTION: TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
; FILE REFERENCE: P3235P1C4
; CURRENT APPLICATION NUMBER: US/10/223,087
; CURRENT FILING DATE: 2002-08-16
; PRIOR APPLICATION NUMBER: US 10/081,056
; PRIOR FILING DATE: 2002-02-20
; PRIOR APPLICATION NUMBER: US 60/213,637
; PRIOR FILING DATE: 2000-06-23
; PRIOR APPLICATION NUMBER: US 60/219,556
; PRIOR FILING DATE: 2000-07-20
; PRIOR APPLICATION NUMBER: US 60/220,624
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: US 60/220,664
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: PCT/US00/20710
; PRIOR FILING DATE: 2000-07-28
; PRIOR APPLICATION NUMBER: US 60/222,695
; PRIOR FILING DATE: 2000-08-02
; PRIOR APPLICATION NUMBER: US 09/643,657
; PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/23328
; PRIOR FILING DATE: 2000-08-24
; PRIOR APPLICATION NUMBER: US 60/230,978
; PRIOR FILING DATE: 2000-09-07
; PRIOR APPLICATION NUMBER: US 60/232,887
; PRIOR FILING DATE: 2000-09-15
; PRIOR APPLICATION NUMBER: US 09/664,610
; PRIOR FILING DATE: 2000-09-18
; PRIOR APPLICATION NUMBER: US 09/665,350
; PRIOR FILING DATE: 2000-09-18
; PRIOR APPLICATION NUMBER: US 60/242,922
; PRIOR FILING DATE: 2000-10-24
; PRIOR APPLICATION NUMBER: US 09/709,238
; PRIOR FILING DATE: 2000-11-08
; PRIOR APPLICATION NUMBER: PCT/US00/30952
; PRIOR FILING DATE: 2000-11-08
; PRIOR APPLICATION NUMBER: PCT/US00/30873
; PRIOR FILING DATE: 2000-11-10
; PRIOR APPLICATION NUMBER: PCT/US00/32678
; PRIOR FILING DATE: 2000-12-01
; PRIOR APPLICATION NUMBER: US 09/747,259
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: PCT/US00/34956
; PRIOR FILING DATE: 2000-12-20
; PRIOR APPLICATION NUMBER: US 09/767,609
; PRIOR FILING DATE: 2001-01-22
; PRIOR APPLICATION NUMBER: US 09/796,498
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: PCT/US01/06520
; PRIOR FILING DATE: 2001-02-28
; PRIOR APPLICATION NUMBER: PCT/US01/06666
; PRIOR FILING DATE: 2001-03-01
; PRIOR APPLICATION NUMBER: US 09/802,706
; PRIOR FILING DATE: 2001-03-09
; PRIOR APPLICATION NUMBER: US 09/808,689
; PRIOR FILING DATE: 2001-03-14
; PRIOR APPLICATION NUMBER: US 09/816,744
; PRIOR FILING DATE: 2001-03-22
; PRIOR APPLICATION NUMBER: US 09/828,366
; PRIOR FILING DATE: 2001-04-05
; PRIOR APPLICATION NUMBER: US 09/854,208
; PRIOR FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: US 09/854,280
; PRIOR FILING DATE: 2001-05-10
; PRIOR APPLICATION NUMBER: US 09/866,028
; PRIOR FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: US 09/866,034
; PRIOR FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: PCT/US01/17092
; PRIOR FILING DATE: 2001-05-25
; PRIOR APPLICATION NUMBER: US 09/870,574
; PRIOR FILING DATE: 2001-05-30
; PRIOR APPLICATION NUMBER: PCT/US01/17443
; PRIOR FILING DATE: 2001-05-30
; PRIOR APPLICATION NUMBER: PCT/US01/17800
; PRIOR FILING DATE: 2001-06-01
; PRIOR APPLICATION NUMBER: PCT/US01/19692
; PRIOR FILING DATE: 2001-06-20
; PRIOR APPLICATION NUMBER: PCT/US01/21066
; PRIOR FILING DATE: 2001-06-29
; PRIOR APPLICATION NUMBER: PCT/US01/21735
; PRIOR FILING DATE: 2001-07-09
; NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-223-087-318

Query Match 100.0%; Score 1184; DB 14; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 9
US-10-223-083-318
; Sequence 318, Application US/10223083
; Publication No. US20030119112A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Marsters, Scot A.
; APPLICANT: Pan, James
; APPLICANT: Stephan, Jean-Philippe F.

; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
; TITLE OF INVENTION: TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
; FILE REFERENCE: P3235P1C8
; CURRENT APPLICATION NUMBER: US/10/223,083
; CURRENT FILING DATE: 2002-08-16
; PRIOR APPLICATION NUMBER: US 10/081,056
; PRIOR FILING DATE: 2002-02-20
; PRIOR APPLICATION NUMBER: US 60/213,637
; PRIOR FILING DATE: 2000-06-23
; PRIOR APPLICATION NUMBER: US 60/219,556
; PRIOR FILING DATE: 2000-07-20
; PRIOR APPLICATION NUMBER: US 60/220,624
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: US 60/220,664
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: PCT/US00/20710
; PRIOR FILING DATE: 2000-07-28
; PRIOR APPLICATION NUMBER: US 60/222,695
; PRIOR FILING DATE: 2000-08-02
; PRIOR APPLICATION NUMBER: US 09/643,657
; PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/23328
; PRIOR FILING DATE: 2000-08-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-223-083-318

Query Match 100.0%; Score 1184; DB 14; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 10
US-10-223-089-318
; Sequence 318, Application US/10223089
; Publication No. US20030125521A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Marsters, Scot A.
; APPLICANT: Pan, James
; APPLICANT: Stephan, Jean-Philippe F.
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
; TITLE OF INVENTION: TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
; FILE REFERENCE: P3235P1C9
; CURRENT APPLICATION NUMBER: US/10/223,089
; CURRENT FILING DATE: 2002-08-16
; PRIOR APPLICATION NUMBER: US 10/081,056
; PRIOR FILING DATE: 2002-02-20
; PRIOR APPLICATION NUMBER: US 60/213,637
; PRIOR FILING DATE: 2000-06-23
; PRIOR APPLICATION NUMBER: US 60/219,556
; PRIOR FILING DATE: 2000-07-20
; PRIOR APPLICATION NUMBER: US 60/220,624
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: US 60/220,664
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: PCT/US00/20710
; PRIOR FILING DATE: 2000-07-28
; PRIOR APPLICATION NUMBER: US 60/222,695
; PRIOR FILING DATE: 2000-08-02
; PRIOR APPLICATION NUMBER: US 09/643,657
; PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/23328
; PRIOR FILING DATE: 2000-08-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-223-089-318

Query Match 100.0%; Score 1184; DB 14; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
```

RESULT 11
US-10-210-951-62
; Sequence 62, Application US/10210951
; Publication No. US20030170228A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi,Avi J.
; APPLICANT: Goddard,Audrey
; APPLICANT: Godowski,Paul J.
; APPLICANT: Gurney,Austin L.
; APPLICANT: Hillan,Kenneth J.
; APPLICANT: Marsters,Scot A.
; APPLICANT: Pan,James
; APPLICANT: Pitti,Robert M.
; APPLICANT: Roy,Margaret Ann

```
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Stone,Donna M.
;  APPLICANT:  Watanabe,Colin K.
;  APPLICANT:  Wood,William I.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TREATMENT OF TUMOR
;  FILE REFERENCE: P2931R1C1
;  CURRENT APPLICATION NUMBER: US/10/210,951
;  CURRENT FILING DATE:  2002-08-02
;  PRIOR APPLICATION NUMBER: 60/014699
;  PRIOR FILING DATE: 1996-04-01
;  PRIOR APPLICATION NUMBER: 60/026943
;  PRIOR FILING DATE: 1996-09-23
;  PRIOR APPLICATION NUMBER: 60/059121
;  PRIOR FILING DATE: 1997-07-17
;  PRIOR APPLICATION NUMBER: 60/059352
;  PRIOR FILING DATE: 1997-09-19
;  PRIOR APPLICATION NUMBER: 60/062037
;  PRIOR FILING DATE: 1997-10-10
;  PRIOR APPLICATION NUMBER: 60/063755
;  PRIOR FILING DATE: 1997-10-17
;  PRIOR APPLICATION NUMBER: 60/063045
;  PRIOR FILING DATE: 1997-10-24
;  PRIOR APPLICATION NUMBER: 60/063046
;  PRIOR FILING DATE: 1997-10-24
;  PRIOR APPLICATION NUMBER: 60/066511
;  PRIOR FILING DATE: 1997-11-24
;  PRIOR APPLICATION NUMBER: 60/066772
;  PRIOR FILING DATE: 1997-11-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 258
; SEQ ID NO 62
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-210-951-62

  Query Match             100.0%;  Score 1184;  DB 14;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 12
US-10-211-884-62
; Sequence 62, Application US/10211884
; Publication No. US20030175900A1
; GENERAL INFORMATION:
;  APPLICANT: Ashkenazi,Avi J.
;  APPLICANT:  Goddard,Audrey
;  APPLICANT:  Godowski,Paul J.
;  APPLICANT:  Gurney,Austin L.
;  APPLICANT:  Hillan,Kenneth J.
;  APPLICANT:  Marsters,Scot A.
;  APPLICANT:  Pan,James
;  APPLICANT:  Pitti,Robert M.
;  APPLICANT:  Roy,Margaret Ann
;  APPLICANT:  Smith,Victoria
;  APPLICANT:  Stone,Donna M.
;  APPLICANT:  Watanabe,Colin K.
;  APPLICANT:  Wood,William I.
;  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TREATMENT OF TUMOR
;  FILE REFERENCE: P2931R1C1
;  CURRENT APPLICATION NUMBER: US/10/211,884
;  CURRENT FILING DATE:  2002-08-02
;  PRIOR APPLICATION NUMBER: 60/014699
;  PRIOR FILING DATE: 1996-04-01
;  PRIOR APPLICATION NUMBER: 60/026943
;  PRIOR FILING DATE: 1996-09-23
;  PRIOR APPLICATION NUMBER: 60/059121
;  PRIOR FILING DATE: 1997-07-17
;  PRIOR APPLICATION NUMBER: 60/059352
;  PRIOR FILING DATE: 1997-09-19
;  PRIOR APPLICATION NUMBER: 60/062037
;  PRIOR FILING DATE: 1997-10-10
;  PRIOR APPLICATION NUMBER: 60/063755
;  PRIOR FILING DATE: 1997-10-17
;  PRIOR APPLICATION NUMBER: 60/063045
;  PRIOR FILING DATE: 1997-10-24
;  PRIOR APPLICATION NUMBER: 60/063046
;  PRIOR FILING DATE: 1997-10-24
;  PRIOR APPLICATION NUMBER: 60/066511
;  PRIOR FILING DATE: 1997-11-24
;  PRIOR APPLICATION NUMBER: 60/066772
;  PRIOR FILING DATE: 1997-11-24
;  Remaining Prior Application data removed - See File Wrapper or PALM.
;  NUMBER OF SEQ ID NOS: 258
; SEQ ID NO 62
;   LENGTH: 220
;   TYPE: PRT
;   ORGANISM: Homo sapiens
US-10-211-884-62

  Query Match             100.0%;  Score 1184;  DB 14;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 1.4e-62;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 13
US-10-223-081-318
; Sequence 318, Application US/10223081
; Publication No. US20030186866A1
; GENERAL INFORMATION:
;  APPLICANT: Baker, Kevin P.
;  APPLICANT:  Ferrara, Napoleone
;  APPLICANT:  Gerber, Hanspeter
;  APPLICANT:  Gerritsen, Mary E.
;  APPLICANT:  Goddard, Audrey
;  APPLICANT:  Godowski, Paul J.
;  APPLICANT:  Gurney, Austin L.
;  APPLICANT:  Hillan, Kenneth J.
;  APPLICANT:  Marsters, Scot A.
;  APPLICANT:  Pan, James
;  APPLICANT:  Stephan, Jean-Philippe F.
;  APPLICANT:  Watanabe, Colin K.
;  APPLICANT:  Wood, William I.
```

; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
; TITLE OF INVENTION: TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
; FILE REFERENCE: P3235P1C7
; CURRENT APPLICATION NUMBER: US/10/223,081
; CURRENT FILING DATE: 2002-08-16
; PRIOR APPLICATION NUMBER: US 10/081,056
; PRIOR FILING DATE: 2002-02-20
; PRIOR APPLICATION NUMBER: US 60/213,637
; PRIOR FILING DATE: 2000-06-23
; PRIOR APPLICATION NUMBER: US 60/219,556
; PRIOR FILING DATE: 2000-07-20
; PRIOR APPLICATION NUMBER: US 60/220,624
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: US 60/220,664
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: PCT/US00/20710
; PRIOR FILING DATE: 2000-07-28
; PRIOR APPLICATION NUMBER: US 60/222,695
; PRIOR FILING DATE: 2000-08-02
; PRIOR APPLICATION NUMBER: US 09/643,657
; PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/23328
; PRIOR FILING DATE: 2000-08-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-223-081-318

Query Match 100.0%; Score 1184; DB 14; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 14
US-10-223-082-318
; Sequence 318, Application US/10223082
; Publication No. US20030191059A1
; GENERAL INFORMATION:
; APPLICANT: Baker, Kevin P.
; APPLICANT: Ferrara, Napoleone
; APPLICANT: Gerber, Hanspeter
; APPLICANT: Gerritsen, Mary E.
; APPLICANT: Goddard, Audrey
; APPLICANT: Godowski, Paul J.
; APPLICANT: Gurney, Austin L.
; APPLICANT: Hillan, Kenneth J.
; APPLICANT: Marsters, Scot A.
; APPLICANT: Pan, James
; APPLICANT: Stephan, Jean-Philippe F.
; APPLICANT: Watanabe, Colin K.
; APPLICANT: Wood, William I.
; APPLICANT: Williams, P.Mickey
; APPLICANT: Ye, Weilan
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
; TITLE OF INVENTION: TREATMENT OF DISORDERS INVOLVING ANGIOGENESIS
; FILE REFERENCE: P3235P1C3
; CURRENT APPLICATION NUMBER: US/10/223,082
; CURRENT FILING DATE: 2002-08-16
; PRIOR APPLICATION NUMBER: US 10/081,056
; PRIOR FILING DATE: 2002-02-20
; PRIOR APPLICATION NUMBER: US 60/213,637
; PRIOR FILING DATE: 2000-06-23
; PRIOR APPLICATION NUMBER: US 60/219,556
; PRIOR FILING DATE: 2000-07-20
; PRIOR APPLICATION NUMBER: US 60/220,624
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: US 60/220,664
; PRIOR FILING DATE: 2000-07-25
; PRIOR APPLICATION NUMBER: PCT/US00/20710
; PRIOR FILING DATE: 2000-07-28
; PRIOR APPLICATION NUMBER: US 60/222,695
; PRIOR FILING DATE: 2000-08-02
; PRIOR APPLICATION NUMBER: US 09/643,657
; PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: PCT/US00/23522
; PRIOR FILING DATE: 2000-08-23
; PRIOR APPLICATION NUMBER: PCT/US00/23328
; PRIOR FILING DATE: 2000-08-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 383
; SEQ ID NO 318
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-223-082-318

Query Match 100.0%; Score 1184; DB 14; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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RESULT 15
US-10-211-858-62
; Sequence 62, Application US/10211858
; Publication No. US20030211096A1
; GENERAL INFORMATION:
; APPLICANT: Ashkenazi,Avi J.
; APPLICANT: Goddard,Audrey
; APPLICANT: Godowski,Paul J.
; APPLICANT: Gurney,Austin L.
; APPLICANT: Hillan,Kenneth J.
; APPLICANT: Marsters,Scot A.
; APPLICANT: Pan,James
; APPLICANT: Pitti,Robert M.
; APPLICANT: Roy,Margaret Ann
; APPLICANT: Smith,Victoria
; APPLICANT: Stone,Donna M.

; APPLICANT: Watanabe,Colin K.
; APPLICANT: Wood,William I.
; TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE TREATMENT OF TUMOR
; FILE REFERENCE: P2931R1C1
; CURRENT APPLICATION NUMBER: US/10/211,858
; CURRENT FILING DATE: 2002-08-02
; PRIOR APPLICATION NUMBER: 60/014699
; PRIOR FILING DATE: 1996-04-01
; PRIOR APPLICATION NUMBER: 60/026943
; PRIOR FILING DATE: 1996-09-23
; PRIOR APPLICATION NUMBER: 60/059121
; PRIOR FILING DATE: 1997-07-17
; PRIOR APPLICATION NUMBER: 60/059352
; PRIOR FILING DATE: 1997-09-19
; PRIOR APPLICATION NUMBER: 60/062037
; PRIOR FILING DATE: 1997-10-10
; PRIOR APPLICATION NUMBER: 60/063755
; PRIOR FILING DATE: 1997-10-17
; PRIOR APPLICATION NUMBER: 60/063045
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/063046
; PRIOR FILING DATE: 1997-10-24
; PRIOR APPLICATION NUMBER: 60/066511
; PRIOR FILING DATE: 1997-11-24
; PRIOR APPLICATION NUMBER: 60/066772
; PRIOR FILING DATE: 1997-11-24
; Remaining Prior Application data removed - See File Wrapper or PALM.
; NUMBER OF SEQ ID NOS: 258
; SEQ ID NO 62
; LENGTH: 220
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-211-858-62

Query Match 100.0%; Score 1184; DB 15; Length 220;
Best Local Similarity 100.0%; Pred. No. 1.4e-62;
Matches 220; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
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Search completed: March 27, 2005, 16:03:34
Job time : 72.7647 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:31:17 ; Search time 23.1373 Seconds
(without alignments)
914.875 Million cell updates/sec

Title: US-09-357-349D-10
Perfect score: 1184
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 220

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : PIR_79:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	253	21.4	197	2	T47159	hypothetical prote
2	192	16.2	211	2	I49686	glial cell line-de
3	187	15.8	211	2	B37499	glial cell line-de
4	187	15.8	211	2	A37499	glial cell line-de
5	145	12.2	436	2	B55452	cartilage-derived
6	144.5	12.2	1460	1	EDBEIF	immediate-early pr
7	143.5	12.1	575	1	WFBOM	mullerian inhibiti
8	139	11.7	550	2	T36746	probable serine/th
9	138.5	11.7	1585	2	T31611	hypothetical prote
10	136.5	11.5	2205	1	MNWVRN	nonstructural poly
11	136	11.5	574	2	F75356	serine/threonine p
12	135	11.4	553	1	A42499	mullerian inhibiti
13	134.5	11.4	744	2	T35192	probable ABC trans
14	134	11.3	666	2	B70803	hypothetical prote
15	132.5	11.2	775	1	EDBE11	immediate-early pr
16	132	11.1	3530	2	A59266	unconventional myo
17	131.5	11.1	710	2	D96728	hypothetical prote
18	131	11.1	393	2	JC5614	RNB6 protein - rat
19	130.5	11.0	1733	1	B45344	probable nuclear a
20	128	10.8	560	1	WFHUM	mullerian inhibiti
21	127.5	10.8	772	2	T13078	KIAA0992 protein -
22	126.5	10.7	571	2	T43456	hypothetical prote
23	126.5	10.7	575	2	T11753	mullerian inhibiti
24	126	10.6	312	2	A61183	hypothetical prote
25	125	10.6	946	2	S27921	nuclear antigen EB
26	124.5	10.5	533	2	S37781	retinoid X recepto
27	124	10.5	502	2	A55197	Wiskott-Aldrich sy
28	124	10.5	846	2	S52418	GTP-binding regula
29	123.5	10.4	372	2	C39364	GDF-1 embryonic gr
30	123.5	10.4	392	1	PIHUB6	salivary proline-r
31	123.5	10.4	517	2	T10927	3C3.18c protein -
32	123.5	10.4	1241	2	T18311	hypothetical prote
33	123	10.4	222	2	T43500	hypothetical prote
34	123	10.4	485	2	A33647	sulfated surface g
35	123	10.4	539	2	T28770	hypothetical prote
36	122.5	10.3	555	1	S20100	mullerian inhibiti
37	122.5	10.3	1958	2	B40505	hypothetical prote
38	121.5	10.3	431	2	S09824	hypothetical prote
39	121.5	10.3	658	2	T08153	cysteine proteinas
40	120.5	10.2	380	2	S35785	glycoprotein I - b
41	120	10.1	395	2	H75457	hypothetical prote
42	120	10.1	418	2	T15142	hypothetical prote
43	120	10.1	464	2	S22697	extensin - Volvox
44	120	10.1	660	1	QQBE3	BHLF1 protein - hu
45	119.5	10.1	129	2	T06174	pZE40 protein - ba

ALIGNMENTS

RESULT 1
T47159
hypothetical protein DKFZp762B0211.1 - human
C;Species: Homo sapiens (man)
C;Date: 20-Apr-2000 #sequence_revision 20-Apr-2000 #text_change 09-Jul-2004
C;Accession: T47159
R;Blum, H.; Bauersachs, S.; Mewes, H.W.; Weil, B.; Wiemann, S.
submitted to the Protein Sequence Database, March 2000
A;Reference number: Z24379
A;Accession: T47159
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-197 <AAA>
A;Cross-references: UNIPROT:Q99748; EMBL:AL161995
A;Experimental source: adult melanoma (MeWo cell line); clone DKFZp762B0211
C;Genetics:
A;Note: DKFZp762B0211.1

Query Match 21.4%; Score 253; DB 2; Length 197;
Best Local Similarity 37.8%; Pred. No. 1.7e-09;
Matches 82; Conservative 13; Mismatches 66; Indels 56; Gaps 9;

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Qy          11 LSHCPWPRRQPALWP------TLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGH 64
               |||    |  ||| |      || |     :  | |  || :   ||  |
Db          29 LSH----RLGPALVPLHRLPRTLDARIARLAQYRALLQGAPDAMELRELTP--------- 75

Qy          65 LPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARA-AGARGC 123
                  | :||    || | |                        |||    |||| ||| |
Db          76 --------W-AGR----PPGPRR------------------RAGPRRRRARARLGARPC 103

Qy         124 RLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPV 183
                ||   | |  ||||: ||| | ||:|:|:|  |   :|| |  |     ||     |
Db         104 GLRELEVRVSELGLGYASDETVLFRYCAGACEAAARVYDLGLRRLRQRRRLR---RERVR 160

Qy         184 SQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 219
               :||||||| ||  |||:| :| : ||  |||  | |:
Db         161 AQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECACV 197
```

RESULT 2
I49686
glial cell line-derived neuotrophic factor - mouse
C;Species: Mus musculus (house mouse)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 09-Jul-2004
C;Accession: I49686; JC6518
R;Watabe, K.; Fukuda, T.; Tánaka, J.; Honda, H.; Toyohara, K.; Sakai, O.
J. Neurosci. Res. 41, 279-290, 1995
A;Title: Spontaneously immortalized adult mouse Schwann cells secrete autocrine and parac
A;Reference number: I49686; MUID:95379105; PMID:7650763
A;Accession: I49686
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA

A;Residues: 1-211 <RES>
A;Cross-references: UNIPROT:P48540; GB:D49921; NID:g758584; PIDN:BAA08660.1; PID:g758585
R;Matsushita, N.; Fujita, Y.; Tanaka, M.; Nogatsu, T.; Kiuchi, K.
Gene 203, 149-157, 1997
A;Title: Cloning and structural organization of the gene encoding the mouse glial cell l
A;Reference number: JC6518; MUID:98086214; PMID:9426245
A;Accession: JC6518
A;Status: preliminary
A;Molecule type: nucleic acid
A;Residues: 1-211 <MAT>

Query Match 16.2%; Score 192; DB 2; Length 211;
Best Local Similarity 28.8%; Pred. No. 1.2e-05;
Matches 64; Conservative 28; Mismatches 92; Indels 38; Gaps 7;

```
Qy         23 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPA-GHLPGGRTARWC-SGRARR 80
              ||  :|   :|   | |           |      :| :||  |  | |   :  :  :
Db          3 LWDVVAVCLVLLHTASA---------FPLPAGKRLLEAPAEDHSLGHRRVPFALTSDSNM 53

Qy         81 PPPQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAA 118
              |  |               |    |    :||||  |  :|         | | | :
Db         54 PEDYPDQFDDVMDFIQATIKRLKRSPDKQAAALPRRERNRQAAAASPENSRGKGRRGQRG 113

Qy        119 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPP 178
               ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|  :  |
Db        114 KNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCESAETMYDKILKNLSRSRRLT--- 170

Qy        179 GSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 219
               |  | | ||||  : : :||:| |  :  : : ||  |||:
Db        171 -SDKVGQACCRPVAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211
```

RESULT 3
B37499
glial cell line-derived neurotrophic factor precursor - human
N;Alternate names: GDNF
C;Species: Homo sapiens (man)
C;Date: 26-Aug-1999 #sequence_revision 26-Aug-1999 #text_change 09-Jul-2004
C;Accession: B37499
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic r
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: B37499
A;Molecule type: DNA
A;Residues: 1-211 <LIN>
A;Cross-references: UNIPROT:P39905; GB:L19063; GB:L15306; NID:g306761; PIDN:AAA67910.1;
A;Note: sequence extracted from NCBI backbone (NCBIP:132084)
C;Keywords: glycoprotein; homodimer
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-77/Domain: propeptide #status predicted <PRO>
F;78-211/Product: glial cell line-derived neurotrophic factor #status predicted <MAT>
F;126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 15.8%; Score 187; DB 2; Length 211;
Best Local Similarity 28.6%; Pred. No. 2.6e-05;
Matches 63; Conservative 25; Mismatches 98; Indels 34; Gaps 5;

```
Qy         23 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPP 82
              ||  :|   :|       | :|   | |    ||   :    |   |      |  :  |
Db          3 LWDVVAVCLVL-------LHTASAFPLPAGKRPPEAPAEDRSLGRRRAPFALSSDSNMPE 55

Qy         83 PQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAAGA 120
              |               |    |    : |||  |  :|         | | | :
Db         56 DYPDQFDDVMDFIQATIKRLKRSPDKQMAVLPRRERNRQAAAANPENSRGKGRRGQRGKN 115

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|     |     |
Db        116 RGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCDAAETTYDKILKNLSRNRRL----VS 171

Qy        181 RPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 219
               | | ||||  : : :||:| |  :  : : ||  |||:
Db        172 DKVGQACCRPIAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211
```

RESULT 4
A37499
glial cell line-derived neurotrophic factor precursor - rat
N;Alternate names: GDNF
N;Contains: glial cell line-derived neurotrophic factor splice form GDNF555; glial cell l
C;Species: Rattus norvegicus (Norway rat)
C;Date: 16-Feb-1994 #sequence_revision 16-Feb-1994 #text_change 09-Jul-2004
C;Accession: A37499; I67605; I53427; I58180; S61537
R;Lin, L.F.; Doherty, D.H.; Lile, J.D.; Bektesh, S.; Collins, F.
Science 260, 1130-1132, 1993
A;Title: GDNF: a glial cell line-derived neurotrophic factor for midbrain dopaminergic ne
A;Reference number: A37499; MUID:93262463; PMID:8493557
A;Accession: A37499
A;Molecule type: mRNA; protein
A;Residues: 1-211 <LIN>
A;Cross-references: UNIPROT:Q07731; GB:L15305; NID:g310123; PIDN:AAA67909.1; PID:g310124
A;Experimental source: glial cell line B49
A;Note: sequence extracted from NCBI backbone (NCBIP:132083)
R;Springer, J.E.; Seeburger, J.L.; He, J.; Gabrea, A.; Blankenhorn, E.P.; Bergman, L.W.
Exp. Neurol. 131, 47-52, 1995
A;Title: cDNA sequence and differential mRNA regulation of two forms of glial cell line-c
A;Reference number: I53427; MUID:95203379; PMID:7895811
A;Accession: I67605
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-24,'A',52-76,'S',78-89,'K',91-211 <SPR1>
A;Cross-references: GB:S75585; NID:g912790; PIDN:AAB33892.1; PID:g912791
A;Experimental source: Long-Evan rats; splice form GDNF555
A;Accession: I53427
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-76,'S',78-89,'K',91-211 <SPR2>
A;Cross-references: GB:S75583; NID:g912788; PIDN:AAB33891.1; PID:g912789
A;Experimental source: strain uncertain; splice form GDNF633
R;Suter-Crazzolara, C.; Unsicker, K.
Neuroreport 5, 2486-2488, 1994
A;Title: GDNF is expressed in two forms in many tissues outside the CNS.
A;Reference number: I58180; MUID:95210610; PMID:7696586
A;Accession: I58180
A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-24,'A',52-76 <SUT>
A;Cross-references: EMBL:X92495; NID:g1045219; PIDN:CAA63237.1; PID:g1045220
A;Experimental source: strain wistar; kidney
C;Genetics:
A;Gene: gdnf
C;Keywords: disulfide bond; glycoprotein; homodimer
F;1-211/Product: glial cell line-derived neurotrophic factor splice form GDNF633 #status
F;1-24,'A',52-211/Product: glial cell line-derived neurotrophic factor splice form GDNF55
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-77/Domain: propeptide #status predicted <PRO>
F;78-211/Product: glial cell line-derived neurotrophic factor #status experimental <MAT>
F;126,162/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 15.8%; Score 187; DB 2; Length 211;
Best Local Similarity 28.4%; Pred. No. 2.6e-05;
Matches 63; Conservative 29; Mismatches 92; Indels 38; Gaps 7;

```
Qy         23 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPA-GHLPGGRTARWC-SGRARR 80
              ||  :|   :|   | |           |      :| :||  |  | |   :  :  :
Db          3 LWDVVAVCLVLLHTASA---------FPLPAGKRLLEAPAEDHSLGHRRVPFALTSDSNM 53

Qy         81 PPPQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAA 118
              |  |               |    |    :||||  |  :|         | | | :
Db         54 PEDYPDQFDDVMDFIQATIKRLKRSPDKQAAALPRRERNRQAAAASPENSRGKGRRGQRG 113

Qy        119 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPP 178
               ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|  :  |
Db        114 KNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCEAAETMYDKILKNLSRSRRLT--- 170

Qy        179 GSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 219
```

```
                 |  | | ||||  : : :||:| :  :  : : ||  |||:
Db        171 -SDKVGQACCRPVAFDDDLSFLDDSLVYHILRKHSAKRCGCI 211
```

RESULT 5
B55452
cartilage-derived morphogenetic protein 2 precursor - bovine (fragment)
C;Species: Bos primigenius taurus (cattle)
C;Date: 10-Feb-1995 #sequence_revision 10-Feb-1995 #text_change 09-Jul-2004
C;Accession: B55452
R;Chang, S.C.; Hoang, B.; Thomas, J.T.; Vukicevic, S.; Luyten, F.P.; Ryba, N.J.P.; Kozak
J. Biol. Chem. 269, 28227-28234, 1994
A;Title: Cartilage-derived morphogenetic proteins. New members of the transforming growt
A;Reference number: A55452; MUID:95050604; PMID:7961761
A;Accession: B55452
A;Status: preliminary; not compared with conceptual translation
A;Molecule type: mRNA
A;Residues: 1-436 <CHA>
A;Cross-references: UNIPROT:P55106; GB:U13661; NID:g632489; PIDN:AAA61416.1; PID:g632490
C;Superfamily: inhibin

  Query Match 12.2%; Score 145; DB 2; Length 436;
  Best Local Similarity 24.0%; Pred. No. 0.02;
  Matches 69; Conservative 17; Mismatches 74; Indels 128; Gaps 15;

```
Qy         16 WPRRQPALWPTLAALALLSSVAEASLGSAP-------RSPAPREGPPPVLASPAGHLPGG 68
              |   :|  |  |  | |       |: |  |       |:| |:: ||| | |    | |
Db        191 WRGLRPQPWKQL-CLEL-----RAAWGGEPGAAEDEARTPGPQQPPPPDLRS----LGFG 240

Qy         69 RTARWCSGRA-----------------------------------RRPPPQPSRPAPPP 92
              |  |    ||                                  |||      |||
Db        241 RRVRTPQERALLVVFSRSQRKTLFAEMREQLGSATEVVGPGGGAEGSGPPP------PPP 294

Qy         93 PAPPSALPRGGRAARAGGPGSRARAAGA--------RGCRLRSQLVPVRALGLGHRSDEL 144
              | |||  |  |    :  || | | | |       :  |||    |:
Db        295 PPPPSGTPDAG--LWSPSPGRRRRTAFASRHGKRHGKKSRLRCSKKPLH---------- 341

Qy        145 VRFR-----------------FCSGSCRRARSPHDLSLASLLGAGALRP---------- 176
              | |:                | | |       |  | |      | |
Db        342 VNFKELGWDDWIIAPLEYEAYHCEGVC-------DFPLRS-----HLEPTNHAIIQTLMN 389

Qy        177 --PPGSRPVSQPCCRPTRYEAVSFMDV----NSTWRTVDRLSATACGC 218
                 ||| | |  || ||:   :| : :    |  :   : :   :|||
Db        390 SMDPGSTPPS--CCVPTKLTPISILYIDAGNNVVYNEYEEMVVESCGC 435
```

RESULT 6
EDBEIF
immediate-early protein IE180 - suid herpesvirus 1 (strain Indiana-Funkhauser)
C;Species: suid herpesvirus 1
C;Date: 30-Jun-1990 #sequence_revision 30-Jun-1990 #text_change 09-Jul-2004
C;Accession: S04713
R;Cheung, A.K.
Nucleic Acids Res. 17, 4637-4646, 1989
A;Title: DNA nucleotide sequence analysis of the immediate-early gene of pseudorabies vi
A;Reference number: S04713; MUID:89315207; PMID:2546124
A;Accession: S04713
A;Molecule type: DNA
A;Residues: 1-1460 <CHE>
A;Cross-references: UNIPROT:P11675
C;Superfamily: herpesvirus immediate-early protein IE175
C;Keywords: DNA binding; early protein; transcription regulation

  Query Match 12.2%; Score 144.5; DB 1; Length 1460;
  Best Local Similarity 29.2%; Pred. No. 0.055;
  Matches 63; Conservative 13; Mismatches 67; Indels 73; Gaps 12;

```
Qy         34 SSVAEASLGSAPRSPA---PREGPPPVLASPAGHLPG-GRTARWCSGRAR---------R 80
              |  | : :| : |:|:      || |       |  || ||  |  | | |         |
Db        115 SPAAGSPVGLSIRAPSTVTSSSGPGP------GPAPGPGRRPRQHSQRQRPGPPAAPGAR 168

Qy         81 PPPQPSRPAPPPPAPPS-ALPRGGRAARAGGP---GSRARAAGARGCRLRSQLVPVRALG 136
              ||||| || |||||||:   |   |  |  ||   |:|:             : | |  |
```

```
Db        169 PPPQPPRP-PPPPAPPAPPAPPAPRRPRGDGPPRGGTRS------------VSPGRRRG 214

Qy        137 LGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGAL--RPPPGSRPVSQPCCRPTRYE 194
              || |       |       | : |         | | |   |||  |       |   |
Db        215 LGPR-------RHQHSQQRWPQRRH--------GGGPLPQPPPPPPGRSRRPAAAAPPPAE 259

Qy        195 AVSFMDVNST-------------------WRTVDRL 211
                : : : ||                  ||   ||
Db        260 GTAVVTITSTASPWLDEPAAARRLDPAAAWRPEPRL 295
```

RESULT 7
WFBOM
mullerian inhibiting factor precursor - bovine
N;Alternate names: Mullerian inhibiting substance (MIS)
C;Species: Bos primigenius taurus (cattle)
C;Date: 13-Aug-1986 #sequence_revision 13-Aug-1986 #text_change 09-Jul-2004
C;Accession: A01398; B01398
R;Cate, R.L.; Mattaliano, R.J.; Hession, C.; Tizard, R.; Farber, N.M.; Cheung, A.; Ninfa,
an, K.L.; Ragin, R.C.; Manganaro, T.F.; MacLaughlin, D.T.; Donahoe, P.K.
Cell 45, 685-698, 1986
A;Title: Isolation of the bovine and human genes for Muellerian inhibiting substance and
A;Reference number: A90879; MUID:86218082; PMID:3754790
A;Accession: A01398
A;Molecule type: DNA
A;Residues: 1-14 <CA1>
A;Cross-references: UNIPROT:P03972
A;Experimental source: newborn calf testis, clones cbmis15 and pS21
A;Accession: B01398
A;Molecule type: mRNA
A;Residues: 15-575 <CA2>
C;Comment: This glycoprotein, produced by the Sertoli cells of the testis, causes regres
 tissues of Mullerian duct origin. Other roles for this protein in gonadal differentiatic
ter duct regression and in the adult ovary.
C;Comment: This protein is homologous to the beta transforming growth factor, inhibin alp
these sequences. All of these proteins are biologically active as disulfide-linked dimer
C;Comment: Although it does not compete with EGF for receptor binding sites, MIS can inhi
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-24/Domain: propeptide #status predicted <PRO>
F;25-575/Product: mullerian inhibiting factor #status predicted <MAT>
F;78,344/Binding site: carbohydrate (Asn) (covalent) #status predicted

  Query Match 12.1%; Score 143.5; DB 1; Length 575;
  Best Local Similarity 24.5%; Pred. No. 0.03;
  Matches 82; Conservative 20; Mismatches 92; Indels 141; Gaps 18;

```
Qy         12 SHCPWPRRQPALWPTLAALALLSSVAEASLGSAP-----RSPAPREGP------------ 54
              | | : |: |||   | | :     |   |   |       || | | |
Db        253 SRC-FTRKTPALLLLLPARSSAPMPAHGRLDLVPFPQPRASPEPEEAPPSADPFLETLTR 311

Qy         55 -------PPVLASP----------AGH--------------------------LP----- 66
                    ||  |||          ||                           ||
Db        312 LVRALAGPPARASPPRLALDPGALAGFPQGQVNLSDPAALERLLDGEEPLLLLLPPTAAT 371

Qy         67 --------GGRTARWCSGRARRPPPQ--------PSRPAPPPPAPPSALPR-----GGRA 105
                      | ::  | :| |||  :         : |  || |||  | |       |
Db        372 TGVPATPQGPKSPLWAAGLARRVAAELQAVAAELRALPGLPPAAPP-LLARLLALCPGNP 430

Qy        106 ARAGGP----------GSRA--------------RAAGARG----CRLRSQLVPVRALG 136
                 |||           | ||              |:|||       | ||    | :||
Db        431 DSPGGPLRALLLLKALQGLRAEWRGRERSGSARAQRSAGAAAADGPCALRELSVDLRA-- 488

Qy        137 LGHRS---DELVRFRFCSGSC---RRARSP----HDLSLASLLGAGALRPPPGSRPVSQP 186
                 ||    |  :   | |:|   :  |:|    | : |  :   ||    |       |
Db        489 --ERSVLIPETYQANNCQGACGWPQSDRNPRYGNHVVLLLKMQARGATLARP-------P 539

Qy        187 CCRPTRYEA---VSFMDVNSTWRTVDRLSATACGC 218
              || || |     :|  :   :   |  : || |||
Db        540 CCVPTAYTGKLLISLSEERISAHHVPNMVATECGC 574
```

```
RESULT 8
T36746
probable serine/threonine protein kinase - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: T36746
R;Saunders, D.; Harris, D.; James, K.D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
submitted to the EMBL Data Library, July 1999
A;Reference number: Z21613
A;Accession: T36746
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-550 <SAU>
A;Cross-references: UNIPROT:Q9S2A6; EMBL:AL096849; PIDN:CAB50939.1; GSPDB:GN00070; SCOED
A;Experimental source: strain A3(2)
C;Genetics:
A;Gene: SCOEDB:SCI11.13
C;Superfamily: serine/threonine protein kinase, PksC type; protein kinase homology

  Query Match             11.7%;  Score 139;  DB 2;  Length 550;
  Best Local Similarity   29.1%;  Pred. No. 0.057;
  Matches   76;  Conservative   11;  Mismatches   88;  Indels   86;  Gaps   13;

Qy          8 LSTL-----SHCPWPRRQPALWPTLAAL-------ALLSSVAEASL-----GSAPRSPAP 50
              ||||         | |||  || | :  |         | :  || :|     | ||    |
Db        224 LSTLRAIVDEAVPPPRRAGALGPVVEGLLRKDPAERLPAEEAERALRLVGAGGAPPGRGP 283

Qy         51 REGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPP-PPAPPSALPRGGRAARAG 109
              | | ||                     || |   |    : | ||  | ||  :|  |  : ||
Db        284 RTGAPP-----------------SG-AFAPTVVAAHPGPPTAPTPPMPVPAAGDTSAAG 324

Qy        110 GPGSRARAAGARGCRLRSQL-----VPVRAL-GLGH----RSDELVRFRFCSGSCRRARS 159
               ||    | | |  | |: |     | | || || :    |||          ||
Db        325 APG----APGGRDRRARAVLLVGLAVLVLALAGLTYSLLDRSDGGGGTEGSGGS----PG 376

Qy        160 PHDLSLASLLGAGALRPPP--------------------GSRPVSQPCCRPTRYEAVSF 198
              |   | |:  |||   ||                    |||      | |    | :|
Db        377 PGATSAATSGGAGEPSPPASSGTDGGQSGPAAQSVEVTVVGSRTHYSGACPPPHDRAPAF 436

Qy        199 ----------MDVNSTWRTVD 209
                         :|   | | |
Db        437 TATFTVGRLPAEVGYRWVTAD 457


RESULT 9
T31611
hypothetical protein Y50E8A.g - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Date: 29-Oct-1999 #sequence_revision 29-Oct-1999 #text_change 29-Oct-1999
C;Accession: T31611
R;Steward, C.
submitted to the EMBL Data Library, September 1999
A;Reference number: Z21047
A;Accession: T31611
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-1585 <WIL>
A;Cross-references: EMBL:AL117200; NID:e1549770; PIDN:CAB55050.1; CESP:Y50E8A.g
A;Experimental source: clone Y50E8A
C;Genetics:
A;Gene: CESP:Y50E8A.g
A;Introns: 25/3; 60/1; 133/2; 217/3; 270/3; 337/2; 400/1; 746/2

  Query Match             11.7%;  Score 138.5;  DB 2;  Length 1585;
  Best Local Similarity   29.8%;  Pred. No. 0.14;
  Matches   48;  Conservative   15;  Mismatches   61;  Indels   37;  Gaps    5;

Qy          4 GLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLG-----------SAPRSPAPR 51
              | | |     | |   ||  |:    :  ||   |: |           :||  | |
Db       1425 GYSGGSAAPPPPPPAPAPAPASSGGYSGGSSGGSAAGGGGGSSGGYTGGSAAPPPPPP 1484

Qy         52 EGPPPVLASPA------GHL----------PGGRTARWCSGRARRPPPQPSRPAPPPPAP 95
                 |||   :||      |:           || ::   :| :  ||| |  | ||||||
Db       1485 PPPPPPAPAPAPASSGGYSGGSSGGSAAGGGGGSSGGYTGGSAAPPPPPPPPPPPAP 1544

Qy         96 -PSALP--------RGGRAARAGGPGSRARAAGARGCRLRS 127
               |: |         | :|  || ||     :|:|  | |:
Db       1545 APAPAPSSGGYSGGSSGGSAAGGGGGSSGGYSGSRFARHRA 1585


RESULT 10
MNWVRN
nonstructural polyprotein - rubella virus (strain Therien)
N;Contains: nonstructural protein NS1; nonstructural protein NS2; nonstructural protein N
C;Species: rubella virus
C;Date: 30-Sep-1989 #sequence_revision 30-Jun-1992 #text_change 09-Jul-2004
C;Accession: A35320; A29811
R;Dominguez, G.; Wang, C.Y.; Frey, T.K.
Virology 177, 225-238, 1990
A;Title: Sequence of the genome RNA of rubella virus: evidence for genetic rearrangement
A;Reference number: A35320; MUID:90281585; PMID:2353453
A;Accession: A35320
A;Molecule type: genomic RNA
A;Residues: 1-2205 <DOM>
A;Cross-references: UNIPROT:P13889; GB:M15240; NID:g333971; PIDN:AAA88528.1; PID:g333972
R;Frey, T.K.; Marr, L.D.
Gene 62, 85-99, 1988
A;Title: Sequence of the region coding for virion proteins C and E2 and the carboxy term
A;Reference number: A29811; MUID:88226020; PMID:2836271
A;Accession: A29811
A;Molecule type: genomic RNA
A;Residues: 1737-2205 <FRE>
A;Cross-references: GB:M15240
C;Comment: The cleavage sites of this polyprotein have not been determined.
C;Superfamily: rubella virus nonstructural polyprotein
C;Keywords: nonstructural protein

  Query Match             11.5%;  Score 136.5;  DB 1;  Length 2205;
  Best Local Similarity   28.0%;  Pred. No. 0.24;
  Matches   60;  Conservative   17;  Mismatches   68;  Indels   69;  Gaps   13;

Qy         14 CPWPRR---QPALW---------PTLAALALL-----------------------SSVAE 38
              | | :|   :||:          | | ||||                       ::
Db        647 CAWAQRLLGEPAVMHLPYTDGDVPQLIALALRTLAQQGAALALSVRDLPGGAAFDANAVT 706

Qy         39 ASLGSAPR-----SPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPP 93
              |:: : ||     || | : |||  |          |: |    |  ||| |:|  ||||
Db        707 AAVRAGPRQSAAASPPPGDPPPPRRAR--------RSQRHSDARG-TPPPAPARD-PPPP 756

Qy         94 AP-PSALPRGGRAAR--AGGPGSRARAAGAR-GCRLRSQLVPVRALGLGHRSDELVRFRF 149
              || | | || |         ||  ||| |      |          ||        ::|
Db        757 APSPPAPPRAGDPVPPIPAGPADRARDAELEVACEPSGPPTSTRA----DPDSDIVE--- 809

Qy        150 CSGSCRRARSPHDLSLASLLGAGALRPPPGSRPV 183
                |  ||  |  | :  ::      |||| : |
Db        810 ---SYARAAGPVHLRVRDIMD-----PPPGCKVV 835


RESULT 11
F75356
serine/threonine protein kinase-related protein - Deinococcus radiodurans (strain R1)
C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: F75356
R;White, O.; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Dodson, R.J.; F
, M.; Shen, M.; Vamathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalewski, C.; Mak
S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
A;Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans R1.
A;Reference number: A75250; MUID:20036896; PMID:10567266
A;Accession: F75356
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-574 <WHI>
A;Cross-references: UNIPROT:Q9RTJ3; GB:AE002018; GB:AE000513; NID:g6459537; PIDN:AAF1132
A;Experimental source: strain R1
```

C;Genetics:
A;Gene: DR1769
A;Map position: 1

Query Match 11.5%; Score 136; DB 2; Length 574;
Best Local Similarity 29.4%; Pred. No. 0.09;
Matches 53; Conservative 12; Mismatches 57; Indels 58; Gaps 9;

```
Qy          8 LSTLSHCPWP--RRQPALWPTLAALALLS-------SVAEASLGSAPRSPAPREGPPPVL 58
              |  |:  |||  |  |  |  |  | |:       : | ||    || |   : | |
Db        372 LRPLATGPWPTFRASPLGWGRSATAAELTAQTQARQAAAAASTSQQPRLPTLAQAPAPTP 431

Qy         59 ASPAGHLPGGRTARWCSGRARRPPPQPSRPA-PPPPAPPSALPRG--------------- 102
              | ||   |              || | |::|| |  | || | |
Db        432 A-PAQTTP------------RPQPTPAQPATPAAPVPPVASPAPATARLTPQVIGGVIY 477

Qy        103 ----------GRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSG 152
                       |   :|| |       ||::  ||    |||||:|        |:  || :|
Db        478 LPLSPIAAGLGYQVQAGSPTRALLVAGSQ--RL---TVPVRAVG----GQSLIALRFVTG 528
```

RESULT 12
A42499
mullerian inhibiting factor precursor - rat
N;Alternate names: anti-mullerian hormone; mullerian inhibiting substance (MIS)
C;Species: Rattus norvegicus (Norway rat)
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 09-Jul-2004
C;Accession: A42499
R;Haqq, C.; Lee, M.M.; Tizard, R.; Wysk, M.; DeMarinis, J.; Donahoe, P.K.; Cate, R.L.
Genomics 12, 665-669, 1992
A;Title: Isolation of the rat gene for Mullerian inhibiting substance.
A;Reference number: A42499; MUID:92241861; PMID:1572639
A;Accession: A42499
A;Molecule type: DNA
A;Residues: 1-553 <HAQ>
A;Cross-references: UNIPROT:P49000; GB:S98336; NID:g248896; PIDN:AAB22104.1; PID:g248897
A;Note: sequence extracted from NCBI backbone (NCBIN:98336, NCBIP:98343)
C;Superfamily: inhibin
C;Keywords: cytotoxin; glycoprotein; gonadal differentiation; testis

Query Match 11.4%; Score 135; DB 1; Length 553;
Best Local Similarity 25.4%; Pred. No. 0.1;
Matches 61; Conservative 21; Mismatches 78; Indels 80; Gaps 12;

```
Qy         30 LALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRARRPPPQ----- 84
              | || | | |::|    |  :|   |                    | :| |||   :
Db        342 LLLLLSPAAATVGEPMRLHSPTSAP-----------------WAAGLARRVAVELQAAA 383

Qy         85 ---PSRPAPPPPAPP------SALPRGGRAA---------------------RAG-GPG 112
                 |  || |||      :  |   |:|                        | | |
Db        384 SELRDLPGLPPTAPPLLSRLLALCPNDSRSAGDPLRALLLLKALQGLRAEWRGREGRGRA 443

Qy        113 SRARAAGARG-CRLRSQLVPVRALGLGHRS---DELVRFRFCSGSC---RRARSP----H 161
               |::  |  | | ||   | :||      ||    |  :   | |:|   :  |:|    |
Db        444 GRSKGTGTDGLCALRELSVDLRA----ERSVLIPETYQANNCQGACAWPQSDRNPRYGNH 499

Qy        162 DLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEA---VSFMDVNSTWRTVDRLSATACGC 218
              : |  :  ||            |||  || |     :|  : : :   |  : || |||
Db        500 VVLLLKMQARGAALG-------RLPCCVPTAYTGKLLISLSEEHISAHHVPNMVATECGC 552
```

RESULT 13
T35192
probable ABC transporter - Streptomyces coelicolor
C;Species: Streptomyces coelicolor
C;Date: 05-Nov-1999 #sequence_revision 05-Nov-1999 #text_change 09-Jul-2004
C;Accession: T35192
R;Seeger, K.; Harris, D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
submitted to the EMBL Data Library, April 1998
A;Reference number: Z21571
A;Accession: T35192
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-744 <SEE>
A;Cross-references: UNIPROT:O69995; EMBL:AL022374; PIDN:CAA18516.1; GSPDB:GN00070; SCOEDB
A;Experimental source: strain A3(2)
C;Genetics:
A;Gene: SCOEDB:SC5B8.08

Query Match 11.4%; Score 134.5; DB 2; Length 744;
Best Local Similarity 30.6%; Pred. No. 0.14;
Matches 64; Conservative 15; Mismatches 87; Indels 43; Gaps 9;

```
Qy          4 GLGGLSTLSHCPWPRRQPA----LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLA 59
              |   ::  :  | ||: ||      |  |       :   :   | | :|||  |||   |
Db        356 GPASVAVPNRTPGPRQAPAPVSGHGPEAAPSPSAPAPGPSEPASGPSAPAP--GPPAPAA 413

Qy         60 SPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP---PSALP----RGGRAARAGGPG 112
               |:   ||       :|    | | || ||  | ||   ||||     |  |  ||  ||
Db        414 GPSAPAPGPSAP---AGGPSAPAPGPSEPASGPSAPAPGPSALDAEPLRTPRPFRALVPG 470

Qy        113 S-RARAAGAR---GCRLRSQLVPVRALGLGHRSDELVRFRFCSGS-------------CR 155
              | | | | |        :||   |:| |    |   ||  | :|:              |
Db        471 SARTREATATLPPPISVRSAPSPLRPLRYELRRAVGVRTGFVTGAVVLLVSAVVAVVLAR 530

Qy        156 RARSPHDLSLA----------SLLGAGAL 174
                 :|    ||          : |||| |
Db        531 VGHTPQPRLLAAWPRELPLPPAALGAGLL 559
```

RESULT 14
B70803
hypothetical protein Rv3876 - Mycobacterium tuberculosis (strain H37RV)
C;Species: Mycobacterium tuberculosis
C;Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 09-Jul-2004
C;Accession: B70803
R;Cole, S.T.; Brosch, R.; Parkhill, J.; Garnier, T.; Churcher, C.; Harris, D.; Gordon, S.
; Connor, R.; Davies, R.; Devlin, K.; Feltwell, T.; Gentles, S.; Hamlin, N.; Holroyd, S.;
Rajandream, M.A.; Rogers, J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares, S.
Nature 393, 537-544, 1998
A;Authors: Sgares, R.; Sulston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G.
A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete genome
A;Reference number: A70500; MUID:98295987; PMID:9634230
A;Accession: B70803
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
A;Molecule type: DNA
A;Residues: 1-666 <COL>
A;Cross-references: UNIPROT:O69740; GB:AL022120; GB:AL123456; NID:g3261558; PIDN:CAA1796
A;Experimental source: strain H37Rv
C;Genetics:
A;Gene: Rv3876

Query Match 11.3%; Score 134; DB 2; Length 666;
Best Local Similarity 31.1%; Pred. No. 0.14;
Matches 50; Conservative 8; Mismatches 47; Indels 56; Gaps 8;

```
Qy         15 PWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPR--EGPPPVLASPAGHLPG----- 67
              | |    ||  || : ||          || | |:   | |     ||| |:|
Db        135 PMPIAGPAPTPTESQLA-----------PPRPPTPQTPTGAPQQPESPAPHVPSHGPHQ 182

Qy         68 -GRTA---RWCSGRARRPPPQPSRPAPPPPAPPS-ALPRGGRAARAG------------- 109
               |||    |       ||| ||||:  |  ||:   |:  | || |
Db        183 PRRTAPAPPWAKMPIGEPPPAPSRPSASPAEPPTRPAPQHSRRARRGHRYRTDTERNVGK 242

Qy        110 ---GPG--SRARAAGARGCRL--------------RSQLVP 131
                 ||   :| ||  | | :|              || | |
Db        243 VATGPSIQARLRAEEASGAQLAPGTEPSPAPLGQPRSYLAP 283
```

RESULT 15
EDBE11
immediate-early protein IE110 - human herpesvirus 1 (strain 17)
C;Species: human herpesvirus 1
C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 09-Jul-2004
C;Accession: A29152
R;Perry, L.J.; Rixon, F.J.; Everett, R.D.; Frame, M.C.; McGeoch, D.J.

J. Gen. Virol. 67, 2365-2380, 1986
A;Title: Characterization of the IE110 gene of herpes simplex virus type 1.
A;Reference number: A29152; MUID:87059760; PMID:3023529
A;Accession: A29152
A;Molecule type: DNA
A;Residues: 1-775 <PER>
A;Cross-references: UNIPROT:P08393; GB:X04614; NID:g59832; PIDN:CAA28285.1; PID:g59833
C;Genetics:
A;Introns: 19/3; 242/1
C;Superfamily: herpesvirus immediate-early protein IE110; RING finger homology
C;Keywords: DNA binding; early protein; transcription regulation; zinc finger
F;112-162/Domain: RING finger homology <RNG>
F;116-156/Region: zinc finger C3HC4 motif

Query Match 11.2%; Score 132.5; DB 1; Length 775;
Best Local Similarity 25.8%; Pred. No. 0.19;
Matches 57; Conservative 14; Mismatches 65; Indels 85; Gaps 9;

```
Qy          15 PWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAG--------HLP 66
               | ||| |   |   | |    |   :  :||:  | |  ||     | |        :
Db         247 PAPRRTPRAPPRRGAAA--PPVTGGASHAAPQPAAARTAPPSAPIGPHGSSNTNTTTNSS 304

Qy          67 GGRTARWC-------------------------SGRAR-RPPPQPSRPAP---------- 90
               ||  :|                          :|| | |  |  :||||
Db         305 GGGGSRQSRAAAPRGASGPSGGVGVGVGVVEAEAGRPRGRTGPLVNRPAPLANNRDPIVI 364

Qy          91 ---PPPAP--PSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELV 145
                  || :|  | | |  | | | | | | | :  ||    |: : |
Db         365 SDSPPASPHRPPAAPMPGSAPRPGPPASAAASGPARP---RAAVAP-------------- 407

Qy         146 RFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQP 186
                     | ||  |          | |   | ||: | ::|
Db         408 --------CVRAPPP---------GPGPRAPAPGAEPAARP 431
```

Search completed: March 27, 2005, 15:45:04
Job time : 23.4706 secs

GenCore version 5.1.6

OM protein - protein search, using sw model

Run on: March 27, 2005, 15:18:47 ; Search time 85.8824 Seconds
(without alignments)
1311.764 Million cell updates/sec

Title: US-09-357-349D-10
Perfect score: 1184
Sequence: 1 MELGLGGLSTLSHCPWPRRQ.....VNSTWRTVDRLSATACGCLG 220

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	1184	100.0	220	2	O96030	O96030 homo sapien
2	1166	98.5	228	2	Q6P6A3	Q6p6a3 homo sapien
3	1075	90.8	237	2	O95441	O95441 homo sapien
4	885	74.7	224	2	Q6AYE8	Q6aye8 rattus norv
5	862	72.8	224	2	Q9Z0L2	Q9z012 m neurotrop
6	542	45.8	157	2	Q810F7	Q810f7 rattus norv
7	502	42.4	125	2	Q9QZG3	Q9qzg3 rattus norv
8	253	21.4	197	1	NRTN_HUMAN	Q99748 homo sapien
9	244	20.6	156	1	PSPN_HUMAN	O60542 homo sapien
10	242	20.4	195	2	Q811Q5	Q811q5 rattus norv
11	235	19.8	195	1	NRTN_MOUSE	P97463 mus musculu
12	232.5	19.6	156	1	PSPN_MOUSE	O70300 mus musculu
13	222	18.8	156	1	PSPN_RAT	O70301 rattus norv
14	221	18.7	41	2	Q810F6	Q810f6 rattus norv
15	192	16.2	211	1	GDNF_MOUSE	P48540 mus musculu
16	192	16.2	240	2	Q6LEL9	Q6lel9 mus musculu
17	190.5	16.1	161	2	Q9QZG0	Q9qzg0 rattus norv
18	187.5	15.8	143	2	Q8MJ77	Q8mj77 ailuropoda
19	187	15.8	211	1	GDNF_HUMAN	P39905 homo sapien
20	187	15.8	211	1	GDNF_RAT	Q07731 rattus norv
21	185.5	15.7	215	2	Q9IAM3	Q9iam3 gallus gall
22	181.5	15.3	160	2	O97685	O97685 macaca mula
23	178.5	15.1	133	2	Q9UD32	Q9ud32 homo sapien
24	175	14.8	235	2	Q98TU0	Q98tu0 brachydanio
25	164	13.9	538	2	Q6SPF0	Q6spf0 homo sapien
26	158.5	13.4	199	2	Q8R485	Q8r485 rattus norv
27	157.5	13.3	134	2	Q804C2	Q804c2 nipponia ni
28	157.5	13.3	143	2	Q8QGE9	Q8qge9 nipponia ni
29	154.5	13.0	633	2	Q7PRT7	Q7prt7 anopheles g
30	153	12.9	182	2	Q9IAM2	Q9iam2 gallus gall
31	152.5	12.9	550	2	Q6SPE9	Q6spe9 oryctolagus
32	152	12.8	121	2	Q6TYB7	Q6tyb7 bos taurus
33	152	12.8	3247	2	Q65553	Q65553 bovine herp
34	152	12.8	3247	2	Q77CD4	Q77cd4 bovine herp
35	151.5	12.8	906	2	Q6MWG9	Q6mwg9 oryza sativ
36	148	12.5	292	2	Q7M5T5	Q7m5t5 porcine ade
37	147.5	12.5	2017	2	Q7XF52	Q7xf52 oryza sativ
38	147.5	12.5	2017	2	Q9AYB6	Q9ayb6 oryza sativ
39	145.5	12.3	2322	2	Q6UDW6	Q6udw6 plasmodium
40	145	12.2	216	2	Q62LP5	Q62lp5 burkholderi
41	145	12.2	367	2	Q7XF40	Q7xf40 oryza sativ
42	145	12.2	367	2	Q9AYC9	Q9ayc9 oryza sativ
43	145	12.2	436	1	GDF6_BOVIN	P55106 bos taurus
44	145	12.2	619	2	Q8LRI0	Q8lri0 oryza sativ
45	143.5	12.1	575	1	MIS_BOVIN	P03972 bos taurus

ALIGNMENTS

RESULT 1
O96030
ID O96030 PRELIMINARY; PRT; 220 AA.
AC O96030;
DT 01-MAY-1999 (TrEMBLrel. 10, Created)
DT 01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE Neurotrophic factor artemin (Pre-pro-neublastin) (Pre-pro-enovin
DE precursor).
GN Name=EVN; Synonyms=ARTN;
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA Milbrandt J.;
RT "Artemin, a novel member of the GDNF ligand family, supports
RT peripheral and central neurons and signals through the GFRalpha3-RET
RT receptor complex.";
RL Neuron 21:1291-1302(1998).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=Brain;
RX MEDLINE=20139608; PubMed=10673327; DOI=10.1006/mcne.1999.0817;
RA Rosenblad C., Gronborg M., Hansen C., Blom N., Meyer M., Johansen J.,
RA Dago L., Kirik D., Patel U.A., Lundberg C., Trono D., Bjorklund A.,
RA Johansen T.E.;
RT "In vivo protection of nigral dopamine neurons by lentiviral gene
RT transfer of the novel GDNF-family member neublastin/artemin.";
RL Mol. Cell. Neurosci. 15:199-214(2000).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=20050601; PubMed=10583383;
RA Masure S., Geerts H., Cik M., Hoefnagel E., Van Den Kieboom G.,
RA Tuytelaars A., Harris S., Lesage A.S., Leysen J.E., van der Helm L.,
RA Verhasselt P., Yon J., Gordon R.D.;
RT "Enovin, a member of the glial cell-line-derived neurotrophic factor
RT (GDNF) family with growth promoting activity on neuronal cells.
RT Existence and tissue-specific expression of different splice
RT variants.";
RL Eur. J. Biochem. 266:892-902(1999).
RN [4]
RP SEQUENCE FROM N.A.
RA Masure S.L.;
RL Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
CC -!- SIMILARITY: Belongs to the TGF-beta family.
DR EMBL; AF115765; AAD13109.1; -.
DR EMBL; AF120274; AAD21075.1; -.
DR EMBL; AJ245628; CAB52396.1; -.
DR EMBL; AF109401; AAC98690.1; -.

```
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0007405; P:neuroblast proliferation; TAS.
DR   GO; GO:0007165; P:signal transduction; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor; Signal.
FT   SIGNAL       1     39       Potential.
FT   CHAIN      108    220       Enovin.
SQ   SEQUENCE   220 AA;  22906 MW;  C47754B19AADCFBB CRC64;

  Query Match             100.0%;  Score 1184;  DB 2;  Length 220;
  Best Local Similarity   100.0%;  Pred. No. 7.7e-58;
  Matches  220;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGA 120

Qy        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 RGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGS 180

Qy        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||||||||||||||||||||||
Db        181 RPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220


RESULT 2
Q6P6A3
ID   Q6P6A3      PRELIMINARY;      PRT;   228 AA.
AC   Q6P6A3;
DT   05-JUL-2004 (TrEMBLrel. 27, Created)
DT   05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
DT   05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
DE   Neurotrophic factor artemin, isoform 3,.
GN   Name=ARTN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RA   Strausberg R.;
RL   Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; BC062375; AAH62375.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   228 AA;  23616 MW;  568BFD09EE05D0FC CRC64;

  Query Match             98.5%;  Score 1166;  DB 2;  Length 228;
  Best Local Similarity   96.1%;  Pred. No. 7.6e-57;
  Matches  219;  Conservative    1;  Mismatches    0;  Indels    8;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRR--------QPALWPTLAALALLSSVAEASLGSAPRSPAPRE 52
              |||||||||||||||||:        ||||||||||||||||||||||||||||||||
Db          1 MELGLGGLSTLSHCPWPRQQAPLGLSAQPALWPTLAALALLSSVAEASLGSAPRSPAPRE 60

Qy         53 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 112
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GPPPVLASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPG 120

Qy        113 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 172
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 SRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAG 180

Qy        173 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 228


RESULT 3
O95441
ID   O95441      PRELIMINARY;      PRT;   237 AA.
AC   O95441;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF115765; AAD13110.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:727; ARTN.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
```

```
SQ   SEQUENCE   237 AA;  24471 MW;  11C64C4B510CE3AB CRC64;

  Query Match             90.8%;  Score 1075;  DB 2;  Length 237;
  Best Local Similarity   100.0%;  Pred. No. 7.5e-52;
  Matches  201;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy         20 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 79
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         37 QPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTARWCSGRAR 96

Qy         80 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 139
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         97 RPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGH 156

Qy        140 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 199
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        157 RSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFM 216

Qy        200 DVNSTWRTVDRLSATACGCLG 220
              |||||||||||||||||||||
Db        217 DVNSTWRTVDRLSATACGCLG 237


RESULT 4
Q6AYE8
ID   Q6AYE8      PRELIMINARY;      PRT;   224 AA.
AC   Q6AYE8;
DT   25-OCT-2004 (TrEMBLrel. 28, Created)
DT   25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Hypothetical protein.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RX   PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
RA   Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
RA   Jones S.J., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Lung;
RA   Director MGC Project;
RL   Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; BC079078; AAH79078.1; -.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor; Hypothetical protein.
SQ   SEQUENCE   224 AA;  23656 MW;  08907D743F651495 CRC64;

  Query Match             74.7%;  Score 885;  DB 2;  Length 224;
  Best Local Similarity   78.1%;  Pred. No. 1.8e-41;
  Matches  175;  Conservative    6;  Mismatches   39;  Indels    4;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||  : ||||  || ||||||||||||||||| ||||    |||| |: | ||||
Db          1 MELGLGEPTALSHCLRPRWQPALWPTLAALALLSSVTEASLDPMSRSPASRDVPSPVLAP 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRAR 116
              |  :|||| ||  || || |||||  :|||||| |    | |  || ||||||   ||||
Db         61 PTDYLPGGHTAHLCSERALRPPPQSPQPAPPPPGPALQSPPAALRGARAARAGTRSSRAR 120

Qy        117 AAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRP 176
              |  |||||||||||| |||||| ||||:|||||||||||||||||||||| |||||
Db        121 ATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSPHDLSLASLLDAGALRS 180

Qy        177 PPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||:|||||||||||||||||||||||| |||||||||
Db        181 PPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 5
Q9Z0L2
ID   Q9Z0L2      PRELIMINARY;      PRT;   224 AA.
AC   Q9Z0L2;
DT   01-MAY-1999 (TrEMBLrel. 10, Created)
DT   01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT   25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
DE   Neurotrophic factor artemin (Mus musculus adult male testis cDNA,
DE   RIKEN full-length enriched library, clone:4930445K15 product:artemin,
DE   full insert sequence) (Mus musculus 2 days pregnant adult female
DE   oviduct cDNA, RIKEN full-length enriched library, clone:E230001A22
DE   product:artemin, full insert sequence).
GN   Name=Artn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=99098192; PubMed=9883723; DOI=10.1016/S0896-6273(00)80649-2;
RA   Baloh R.H., Tansey M.G., Lampe P.A., Fahrner T.J., Enomoto H.,
RA   Simburger K.S., Leitner M.L., Araki T., Johnson E.M. Jr.,
RA   Milbrandt J.;
RT   "Artemin, a novel member of the GDNF ligand family, supports
RT   peripheral and central neurons and signals through the GFRalpha3-RET
RT   receptor complex.";
RL   Neuron 21:1291-1302(1998).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
RA   Carninci P., Hayashizaki Y.;
RT   "High-efficiency full-length cDNA cloning.";
RL   Meth. Enzymol. 303:19-44(1999).
RN   [3]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
RA   RIKEN FANTOM Consortium;
RT   "Functional annotation of a full-length mouse cDNA collection.";
RL   Nature 409:685-690(2001).
RN   [4]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RA   The FANTOM Consortium,
RA   the RIKEN Genome Exploration Research Group Phase I & II Team;
RT   "Analysis of the mouse transcriptome based on functional annotation of
RT   60,770 full-length cDNAs.";
RL   Nature 420:563-573(2002).
RN   [5]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
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RA   Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
RA   Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
RT   "Normalization and subtraction of cap-trapper-selected cDNAs to
RT   prepare full-length cDNA libraries for rapid discovery of new genes.";
RL   Genome Res. 10:1617-1630(2000).
RN   [6]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct, and Testis;
RX   MEDLINE=20530913; PubMed=11076861; DOI=10.1101/gr.152600;
RA   Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P.,
RA   Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M.,
RA   Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A.,
RA   Yamamoto R., Matsumoto H., Sakaguchi S., Ikegami T., Kashiwagi K.,
RA   Fujiwake S., Inoue K., Togawa Y., Izawa M., Ohara E., Watahiki M.,
RA   Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J.,
RA   Okazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;
RT   "RIKEN integrated sequence analysis (RISA) system-384-format
RT   sequencing pipeline with 384 multicapillary sequencer.";
RL   Genome Res. 10:1757-1771(2000).
RN   [7]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Testis;
RA   Adachi J., Aizawa K., Akahira S., Akimura T., Arai A., Aono H.,
RA   Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
RA   Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
RA   Imotani K., Ishii Y., Itoh M., Izawa M., Kasukawa T., Kato H.,
RA   Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
RA   Matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,
RA   Okazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai C., Sakai K.,
RA   Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,
RA   Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T.,
RA   Tejima Y., Toya T., Yamamura T., Yasunishi A., Yoshida K., Yoshino M.,
RA   Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
RN   [8]
RP   SEQUENCE FROM N.A.
RC   STRAIN=C57BL/6J; TISSUE=Oviduct;
RA   Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P.,
RA   Fukuda S., Furuno M., Hanagaki T., Hara A., Hashizume W.,
RA   Hayashida K., Hayatsu N., Hiramoto K., Hiraoka T., Hirozane T.,
RA   Hori F., Imotani K., Ishii Y., Itoh M., Kagawa I., Kasukawa T.,
RA   Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S.,
RA   Kurihara C., Matsuyama T., Miyazaki A., Murata M., Nakamura M.,
RA   Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y.,
RA   Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H.,
RA   Sasaki D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M.,
RA   Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tanaka T.,
RA   Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.;
RL   Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF109402; AAC98691.1; -.
DR   EMBL; AK015393; BAB29827.1; -.
DR   EMBL; AK053914; BAC35590.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:1333791; Artn.
DR   GO; GO:0005615; C:extracellular space; IDA.
DR   GO; GO:0005515; F:protein binding; IPI.
DR   GO; GO:0005102; F:receptor binding; IPI.
DR   GO; GO:0007411; P:axon guidance; IDA.
DR   GO; GO:0050930; P:induction of positive chemotaxis; IDA.
DR   GO; GO:0007422; P:peripheral nervous system development; IMP.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
FT   CHAIN       112    224       neurotrophic factor artemin.
SQ   SEQUENCE   224 AA;  23726 MW;  3328FB794581DF0B CRC64;

  Query Match             72.8%;  Score 862;  DB 2;  Length 224;
  Best Local Similarity   75.9%;  Pred. No. 3.3e-40;
  Matches  170;  Conservative    5;  Mismatches   45;  Indels    4;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              |||||   : ||||  || | | ||||| ||||| | ||||    |||| |:|| ||||
Db          1 MELGLAEPTALSHCLRPRWQSAWWPTLAVLALLSCVTEASLDPMSRSPAARDGPSPVLAP 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRAR 116
              |  ||||| ||  || |  ||||| :|||||| |    | |  || ||||||   ||||
Db         61 PTDHLPGGHTAHLCSERTLRPPPQSPQPAPPPPGPALQSPPAALRGARAARAGTRSSRAR 120

Qy        117 AAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRP 176
              |||||||||||||| |||||| ||||:|||||||||||||| ||||||||||||||
Db        121 TTDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSQHDLSLASLLGAGALRS 180

Qy        177 PPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              ||||||:|||||||||||||||||||||||||| ||||||||||
Db        181 PPGSRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 224


RESULT 6
Q810F7
ID   Q810F7      PRELIMINARY;      PRT;   157 AA.
AC   Q810F7;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=Artn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Liver;
RA   Carmillo P., McAuliffe M., Tizard R., Cate R.L.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY230412; AAO73543.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
KW   Growth factor.
FT   NON_TER     157    157
SQ   SEQUENCE   157 AA;  16458 MW;  47A72BA029677870 CRC64;

  Query Match             45.8%;  Score 542;  DB 2;  Length 157;
  Best Local Similarity   71.3%;  Pred. No. 8.3e-23;
  Matches  112;  Conservative    5;  Mismatches   36;  Indels    4;  Gaps    1;

Qy          1 MELGLGGLSTLSHCPWPRRQPALWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLAS 60
              ||||||  : ||||  || |||||||||||||||| ||||    |||| |: | ||||
Db          1 MELGLGEPTALSHCLRPRWQPALWPTLAALALLSSVTEASLDPMSRSPASRDVPSPVLAP 60

Qy         61 PAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRAR 116
              |  :|||| ||  || || ||||||  :|||||| |    | |  || ||||||   ||||
Db         61 PTDYLPGGHTAHLCSERALRPPPQSPQPAPPPPGPALQSPPAALRGARAARAGTRSSRAR 120

Qy        117 AAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGS 153
              |  |||||||||||| |||||| ||||:||||||||
Db        121 ATDARGCRLRSQLVPVSALGLGHSSDELIRFRFCSGS 157


RESULT 7
Q9QZG3
ID   Q9QZG3      PRELIMINARY;      PRT;   125 AA.
AC   Q9QZG3;
DT   01-MAY-2000 (TrEMBLrel. 13, Created)
DT   01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=ARTN;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Cochlea;
RX   MEDLINE=20185640; PubMed=10719212; DOI=10.1016/S0169-328X(99)00328-9;
RA   Stover T., Gong T.L., Cho Y., Altschuler R.A., Lomax M.I.;
RT   "Expression of the GDNF family members and their receptors in the
RT   mature rat cochlea.";
RL   Brain Res. Mol. Brain Res. 76:25-35(2000).
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AF184919; AAF01241.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor.
FT   NON_TER       1      1
FT   NON_TER     125    125
SQ   SEQUENCE   125 AA;  12983 MW;  8EDE626E44B83231 CRC64;

  Query Match             42.4%;  Score 502;  DB 2;  Length 125;
  Best Local Similarity   78.4%;  Pred. No. 1.1e-20;
  Matches   98;  Conservative    3;  Mismatches   20;  Indels    4;  Gaps    1;

Qy         68 GRTARWCSGRARRPPPQPSRPAPPPPAP----PSALPRGGRAARAGGPGSRARAAGARGC 123
              | ||  || || |||||  :|||||| |    | |  || ||||||   |||||  ||||
Db          1 GHTAHLCSERALRPPPQSPQPAPPPPGPALQSPPAALRGARAARAGTRSSRARATDARGC 60

Qy        124 RLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPV 183
              ||||||||| |||||| |||:|||||||||||||||||||||||||||||| ||||||:
Db         61 RLRSQLVPVSALGLGHSSDELIRFRFCSGSCRRARSPHDLSLASLLGAGALRSPPGSRPI 120

Qy        184 SQPCC 188
              |||||
Db        121 SQPCC 125


RESULT 8
NRTN_HUMAN
ID   NRTN_HUMAN     STANDARD;      PRT;   197 AA.
AC   Q99748;
DT   01-NOV-1997 (Rel. 35, Created)
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Neurturin precursor.
GN   Name=NRTN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=97100947; PubMed=8945474; DOI=10.1038/384467a0;
RA   Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
RA   Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
RT   "Neurturin, a relative of glial-cell-line-derived neurotrophic
RT   factor.";
RL   Nature 384:467-470(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Melanoma;
RA   Blum H., Bauersachs S., Mewes H.-W., Weil B., Wiemann S.;
RL   Submitted (MAR-2000) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   VARIANT HSCR SER-96.
RC   TISSUE=Peripheral blood lymphocytes;
RX   MEDLINE=98367034; PubMed=9700200; DOI=10.1093/hmg/7.9.1449;
RA   Doray B., Salomon R., Amiel J., Pelet A., Touraine R., Billaud M.,
RA   Attie T., Bachy B., Munnich A., Lyonnet S.;
RT   "Mutation of the RET ligand, neurturin, supports multigenic
RT   inheritance in Hirschsprung disease.";
RL   Hum. Mol. Genet. 7:1449-1452(1998).
CC   -!- FUNCTION: Supports the survival of sympathetic neurons in culture.
CC       May regulate the development and maintenance of the CNS. Might
CC       control the size of non-neuronal cell population such as
CC       haemopoietic cells.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- DISEASE: Defects in NRTN are a cause of Hirschsprung disease
CC       (HSCR) [MIM:142623]. In association with mutations of RET gene,
CC       and possibly with other loci, defects in NRTN are involved in
CC       Hirschsprung's disease. This genetic disorder of neural crest
CC       development is characterized by the absence of intramural ganglion
CC       cells in the hindgut, often resulting in intestinal obstruction.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ----------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC   use by non-profit institutions as long as its content is in no way
CC   modified and this statement is not removed. Usage by and for commercial
CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ----------------------------------------------------------------------
DR   EMBL; U78110; AAC50898.1; -.
DR   EMBL; AL161995; CAB82327.1; -.
DR   PIR; T47159; T47159.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:8007; NRTN.
DR   H-InvDB; HIX0014687; -.
DR   MIM; 602018; -.
DR   MIM; 142623; -.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0000165; P:MAPKKK cascade; TAS.
DR   GO; GO:0007399; P:neurogenesis; TAS.
DR   GO; GO:0007169; P:transmembrane receptor protein tyrosine kin. . .; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Disease mutation; Growth factor; Hirschsprung disease; Polymorphism;
KW   Signal.
FT   SIGNAL        1     19       Potential.
FT   PROPEP       20     95       By similarity.
FT   CHAIN        96    197       Neurturin.
FT   DISULFID    103    165       By similarity.
FT   DISULFID    130    194       By similarity.
FT   DISULFID    134    196       By similarity.
FT   DISULFID    164    164       Interchain (By similarity).
FT   VARIANT      96     96       A -> S (in HSCR; associated to a RET
FT                                mutation; incomplete penetrance;
FT                                dbSNP:1801281).
FT                                /FTId=VAR_009498.
SQ   SEQUENCE   197 AA;  22405 MW;  91AFAC8C3F8971FD CRC64;

  Query Match             21.4%;  Score 253;  DB 1;  Length 197;
  Best Local Similarity   37.8%;  Pred. No. 6.6e-07;
  Matches   82;  Conservative   13;  Mismatches   66;  Indels   56;  Gaps    9;

Qy         11 LSHCPWPRRQPALWP------TLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPAGH 64
              |||    | ||| |       || |     :   | |  || :   ||  |
Db         29 LSH----RLGPALVPLHRLPRTLDARIARLAQYRALLQGAPDAMELRELTP--------- 75

Qy         65 LPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARA-AGARGC 123
                    | :||    || | |                   |||    ||||  ||| |
Db         76 --------W-AGR----PPGPRR------------------RAGPRRRRARARLGARPC 103

Qy        124 RLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPV 183
               ||   | |  ||||: ||| | ||:|:|:|  |   :|| |  |     ||     |
Db        104 GLRELEVRVSELGLGYASDETVLFRYCAGACEAAARVYDLGLRRLRQRRRLR---RERVR 160

Qy        184 SQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 219
              :|||||| ||  |||:| :| : ||  |||  | |:
```

```
Db        161 AQPCCRPTAYEDEVSFLDAHSRYHTVHELSARECACV 197


RESULT 9
PSPN_HUMAN
ID   PSPN_HUMAN     STANDARD;      PRT;   156 AA.
AC   O60542;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=PSPN;
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040962; AAC39640.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   Genew; HGNC:9579; PSPN.
DR   MIM; 602921; -.
DR   GO; GO:0005102; F:receptor binding; TAS.
DR   GO; GO:0007417; P:central nervous system development; TAS.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL       1     21       Potential.
FT   CHAIN       22    156       Persephin.
FT   DISULFID    66    124       By similarity.
FT   DISULFID    93    152       By similarity.
FT   DISULFID    97    154       By similarity.
FT   DISULFID   123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  16600 MW;  6547751653A7044A CRC64;

  Query Match             20.6%;  Score 244;  DB 1;  Length 156;
  Best Local Similarity   44.8%;  Pred. No. 1.7e-06;
  Matches   56;  Conservative   17;  Mismatches   36;  Indels   16;  Gaps    3;

Qy        104 RAARAGG-------PGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-R 155
              : |:|||       | :| | | :  |:| |  : |  ||||: |:| | ||:|:||| |
Db         40 QVAKAGGTWLGTHRPLARLRRALSGPCQLWSLTLSVAELGLGYASEEKVIFRYCAGSCPR 99

Qy        156 RARSPHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATA 215
              ||: | |:|| | | |       |    |||||||  |:|:|    |: : :||| |
Db        100 GARTQHGLALARLQGQG--------RAHGGPCCRPTRYTDVAFLDDRHRWQRLPQLSAAA 151

Qy        216 CGCLG 220
              ||| |
Db        152 CGCGG 156


RESULT 10
Q811Q5
ID   Q811Q5      PRELIMINARY;      PRT;   195 AA.
AC   Q811Q5;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Neurturin.
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Substantia nigra;
RX   PubMed=14757528; DOI=10.1016/j.devbrainres.2003.11.006;
RA   Cho J., Kholodilov N.G., Burke R.E.;
RT   "Patterns of developmental mRNA expression of neurturin and GFRalpha2
RT   in the rat striatum and substantia nigra do not suggest a role in the
RT   regulation of natural cell death in dopamine neurons.";
RL   Brain Res. Dev. Brain Res. 148:143-149(2004).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Substantia nigra;
RA   Cho J.W., Kholodilov N.G., Burke R.E.;
RL   Submitted (DEC-2002) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY190603; AAO27768.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
KW   Growth factor.
SQ   SEQUENCE   195 AA;  22184 MW;  55789405F290AD68 CRC64;

  Query Match             20.4%;  Score 242;  DB 2;  Length 195;
  Best Local Similarity   35.8%;  Pred. No. 2.6e-06;
  Matches   76;  Conservative   17;  Mismatches   83;  Indels   36;  Gaps    8;

Qy         24 WPTLAALALLSS-----------VAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 71
              |   | ::|: |           :    || |    ||   ||  |          | |
Db          4 WKAAALVSLICSSLLSVWMCQEGLLLGHRLGPA---LAPLRRPPRTL--------DARIA 52

Qy         72 RWCSGRA---RRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAAGARGCRLRSQ 128
              |    ||      |      |   | || ||      |  ||  |    |:| | ||
Db         53 RLAQYRALLQGAPDAVELRELSPWVARPSG-PR-----RRAGPRRRRARPGSRPCGLREL 106

Qy        129 LVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPGSRPVSQPCC 188
               | |  |||: ||| | ||:|:|:|  |   :|| |  |     :|   |  : |||
Db        107 EVRVSELGLGYTSDETVLFRYCAGACEAAIRIYDLGLRRLRQRRRVRK---ERVRAHPCC 163

Qy        189 RPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 219
              ||| ||  |||:||:| : |:  |||  | |:
Db        164 RPTAYEDEVSFLDVHSRYHTLQELSARECACV 195


RESULT 11
NRTN_MOUSE
ID   NRTN_MOUSE     STANDARD;      PRT;   195 AA.
AC   P97463;
DT   01-NOV-1997 (Rel. 35, Created)
```

```
DT   01-NOV-1997 (Rel. 35, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Neurturin precursor.
GN   Name=Nrtn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A., AND SEQUENCE OF 96-110; 127-135; 155-177 AND
RP   181-190.
RX   MEDLINE=97100947; PubMed=8945474; DOI=10.1038/384467a0;
RA   Kotzbauer P.T., Lampe P.A., Heuckeroth R.O., Golden J.P.,
RA   Creedon D.J., Johnson E.M. Jr., Milbrandt J.;
RT   "Neurturin, a relative of glial-cell-line-derived neurotrophic
RT   factor.";
RL   Nature 384:467-470(1996).
RN   [2]
RP   SEQUENCE FROM N.A.
RC   STRAIN=FVB/N; TISSUE=Mammary gland;
RX   MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
RA   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA   Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA   Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA   Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
RA   Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA   Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA   Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA   Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA   Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA   Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA   Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA   Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA   Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA   Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,
RA   Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA   Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,
RA   Schnerch A., Schein J.E., Jones S.J.M., Marra M.A.;
RT   "Generation and initial analysis of more than 15,000 full-length human
RT   and mouse cDNA sequences.";
RL   Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
CC   -!- FUNCTION: Supports the survival of sympathetic neurons in culture.
CC       May regulate the development and maintenance of the CNS. Might
CC       control the size of non-neuronal cell population such as
CC       haemopoietic cells.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- TISSUE SPECIFICITY: Widespread distribution.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; U78109; AAC52954.1; -.
DR   EMBL; BC057993; AAH57993.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:108417; Nrtn.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Direct protein sequencing; Growth factor; Signal.
FT   SIGNAL       1    19       Potential.
FT   PROPEP      20    95       By similarity.
FT   CHAIN       96   195       Neurturin.
FT   DISULFID   101   163       By similarity.
FT   DISULFID   128   192       By similarity.
FT   DISULFID   132   194       By similarity.
FT   DISULFID   162   162       Interchain (By similarity).
SQ   SEQUENCE   195 AA;  22219 MW;  ABE21BB35D417448 CRC64;

  Query Match             19.8%;  Score 235;  DB 1;  Length 195;
  Best Local Similarity   33.5%;  Pred. No. 6.3e-06;
  Matches   74;  Conservative   17;  Mismatches   76;  Indels   54;  Gaps    8;

Qy         24 WPTLAALALLSS------------VAEASLGSAPRSPAPREGPPPVLASPAGHLPGGRTA 71
              |   | ::|: |             :    || |    ||   ||  |          | |
Db          4 WKAAALVSLICSSLLSVWMCQEGLLLGHRLGPA---LAPLRRPPRTL--------DARIA 52

Qy         72 RWCSGRA-----------RRPPPQPSR-PAPPPPAPPSALPRGGRAARAGGPGSRARAAG 119
              |    ||           |   | :| | |                 |  ||  |    |
Db         53 RLAQYRALLQGAPDAVELRELSPWAARIPGP--------------RRRAGPRRRRARPG 97

Qy        120 ARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPPG 179
              || | ||    | |  |||| ||| | ||:|:|:|  |   :|| |  |      :|
Db         98 ARPCGLRELEVRVSELGLGYTSDETVLFRYCAGACEAAIRIYDLGLRRLRQRRRVR---R 154

Qy        180 SRPVSQPCCRPTRYE-AVSFMDVNSTWRTVDRLSATACGCL 219
              |  : ||||||  ||  |||:||:| : |:  |||  | |:
Db        155 ERARAHPCCRPTAYEDEVSFLDVHSRYHTLQELSARECACV 195


RESULT 12
PSPN_MOUSE
ID   PSPN_MOUSE     STANDARD;      PRT;   156 AA.
AC   O70300;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=Pspn;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=129/SvJ;
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040960; AAC40057.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:1201684; Pspn.
DR   GO; GO:0005615; C:extracellular space; IDA.
DR   GO; GO:0001658; P:ureteric bud branching; IDA.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
```

```
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  17030 MW;  7DC6DD98132E041B CRC64;

  Query Match             19.6%;  Score 232.5;  DB 1;  Length 156;
  Best Local Similarity   43.8%;  Pred. No. 7.2e-06;
  Matches   53;  Conservative   14;  Mismatches   45;  Indels    9;  Gaps    2;

Qy        101 RGGRAARAGGPGSRARAAGARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARS 159
              ||       |     |   | |  ||| |  :||  ||||: |:| | ||:|:||| : ||:
Db         44 RGTWTPHQGNNHVRLPRALAGSCRLWSLTLPVAELGLGYASEEKVIFRYCAGSCPQEART 103

Qy        160 PHDLSLASLLGAGALRPPPGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCL 219
              | | || | | |        |   :|||:|| |  |:|:|    |: : :||| ||||
Db        104 QHSLVLARLRGRG--------RAHGRPCCQPTSYADVTFLDDQHHWQQLPQLSAAACGCG 155

Qy        220 G 220
              |
Db        156 G 156


RESULT 13
PSPN_RAT
ID   PSPN_RAT       STANDARD;      PRT;   156 AA.
AC   O70301;
DT   30-MAY-2000 (Rel. 39, Created)
DT   30-MAY-2000 (Rel. 39, Last sequence update)
DT   05-JUL-2004 (Rel. 44, Last annotation update)
DE   Persephin precursor (PSP).
GN   Name=Pspn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RX   MEDLINE=98150950; PubMed=9491986; DOI=10.1016/S0896-6273(00)80453-5;
RA   Milbrandt J., de Sauvage F.J., Fahrner T.J., Baloh R.H., Leitner M.L.,
RA   Tansey M.G., Lampe P.A., Heuckeroth R.O., Kotzbauer P.T.,
RA   Simburger K.S., Golden J.P., Davies J.A., Vejsada R., Kato A.C.,
RA   Hynes M., Sherman D., Nishimura M., Wang L.-C., Vandlen R., Moffat B.,
RA   Klein R.D., Poulsen K., Gray C., Garces A., Henderson C.E.,
RA   Phillips H.S., Johnson E.M.;
RT   "Persephin, a novel neurotrophic factor related to GDNF and
RT   neurturin.";
RL   Neuron 20:245-253(1998).
RN   [2]
RP   SEQUENCE OF 1-78 FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Pons;
RX   MEDLINE=98374044; PubMed=9710270;
RX   DOI=10.1002/(SICI)1097-4547(19980815)53:4<494::AID-JNR12>3.0.CO;2-2;
RA   Jaszai J., Farkas L.M., Galter D., Reuss B., Strelau J., Unsicker K.,
RA   Krieglstein K.;
RT   "GDNF-related factor persephin is widely distributed throughout the
RT   nervous system.";
RL   J. Neurosci. Res. 53:494-501(1998).
CC   -!- FUNCTION: Exhibits neurotrophic activity on mesencephalic
CC       dopaminergic and motor neurons.
CC   -!- SUBUNIT: Homodimer; disulfide-linked (By similarity).
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
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CC   entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; AF040961; AAC40058.1; -.
DR   EMBL; AJ005169; CAA06410.1; -.
DR   HSSP; Q07731; 1AGQ.
DR   RGD; 3432; Pspn.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Growth factor; Signal.
FT   SIGNAL        1     21       Potential.
FT   CHAIN        22    156       Persephin.
FT   DISULFID     66    124       By similarity.
FT   DISULFID     93    152       By similarity.
FT   DISULFID     97    154       By similarity.
FT   DISULFID    123    123       Interchain (By similarity).
SQ   SEQUENCE   156 AA;  17063 MW;  9631941CC69B00B0 CRC64;

  Query Match             18.8%;  Score 222;  DB 1;  Length 156;
  Best Local Similarity   35.0%;  Pred. No. 2.7e-05;
  Matches   57;  Conservative   20;  Mismatches   50;  Indels   36;  Gaps    5;

Qy         59 ASPAGHLPGGRTARWCSGRARRPPPQPSRPAPPPPAPPSALPRGGRAARAGGPGSRARAA 118
              |  |  |  |: |   :||  : | | :      | | |
Db         29 APAADELSSGKMAE--TGRTWK-PHQGNNNVRLPRALPGL-------------------- 65

Qy        119 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSC-RRARSPHDLSLASLLGAGALRPP 177
                  ||| |  :||  ||||: |:| : ||:|:||| :  |: | | || | | |
Db         66 ----CRLWSLTLPVAELGLGYASEEKIIFRYCAGSCPQEVRTQHSLVLARLRGQG----- 116

Qy        178 PGSRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
                |   :|||:|| |  |:|:| :  |: : :||| |||| |
Db        117 ---RAHGRPCCQPTSYADVTFLDDHHHWQQLPQLSAAACGCGG 156


RESULT 14
Q810F6
ID   Q810F6      PRELIMINARY;      PRT;    41 AA.
AC   Q810F6;
DT   01-JUN-2003 (TrEMBLrel. 24, Created)
DT   01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT   01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
DE   Artemin (Fragment).
GN   Name=Artn;
OS   Rattus norvegicus (Rat).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX   NCBI_TaxID=10116;
RN   [1]
RP   SEQUENCE FROM N.A.
RC   STRAIN=Sprague-Dawley; TISSUE=Liver;
RA   Carmillo P., McAuliffe M., Tizard R., Cate R.L.;
RL   Submitted (FEB-2003) to the EMBL/GenBank/DDBJ databases.
CC   -!- SIMILARITY: Belongs to the TGF-beta family.
DR   EMBL; AY230413; AAO73544.1; -.
DR   GO; GO:0008083; F:growth factor activity; IEA.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   ProDom; PD000357; TGFb; 1.
KW   Growth factor.
FT   NON_TER       1      1
SQ   SEQUENCE   41 AA;  4517 MW;  1ED39984A7D03EDB CRC64;

  Query Match             18.7%;  Score 221;  DB 2;  Length 41;
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  Best Local Similarity   95.1%;  Pred. No. 1.1e-05;
  Matches   39;  Conservative    1;  Mismatches    1;  Indels    0;  Gaps    0;

Qy        180 SRPVSQPCCRPTRYEAVSFMDVNSTWRTVDRLSATACGCLG 220
              |||:||||||||||||||||||||||||| ||||||||||
Db          1 SRPISQPCCRPTRYEAVSFMDVNSTWRTVDHLSATACGCLG 41


RESULT 15
GDNF_MOUSE
ID   GDNF_MOUSE     STANDARD;      PRT;   211 AA.
AC   P48540; O09058; P70446; P97919; P97920;
DT   01-FEB-1996 (Rel. 33, Created)
DT   01-FEB-1996 (Rel. 33, Last sequence update)
DT   25-JAN-2005 (Rel. 46, Last annotation update)
DE   Glial cell line-derived neurotrophic factor precursor.
GN   Name=Gdnf;
OS   Mus musculus (Mouse).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX   NCBI_TaxID=10090;
RN   [1]
RP   SEQUENCE FROM N.A. (ISOFORM 1).
RC   STRAIN=ICR; TISSUE=Dorsal root ganglion;
RX   MEDLINE=95379105; PubMed=7650763;
RA   Watabe K., Fukuda T., Tanaka J., Honda H., Toyohara K., Sakai O.;
RT   "Spontaneously immortalized adult mouse Schwann cells secrete
RT   autocrine and paracrine growth-promoting activities.";
RL   J. Neurosci. Res. 41:279-290(1995).
RN   [2]
RP   SEQUENCE FROM N.A., AND ALTERNATIVE SPLICING.
RC   STRAIN=C57BL/10J; TISSUE=Brain;
RA   Wang F., Too H.P.;
RL   Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   SEQUENCE FROM N.A. (ISOFORM 1).
RC   STRAIN=129/SvJ;
RX   MEDLINE=96404131; PubMed=8808409;
RA   Hellmich H.L., Kos L., Cho E.S., Mahon K.A., Zimmer A.;
RT   "Embryonic expression of glial cell-line derived neurotrophic factor
RT   (GDNF) suggests multiple developmental roles in neural differentiation
RT   and epithelial-mesenchymal interactions.";
RL   Mech. Dev. 54:95-105(1996).
RN   [4]
RP   SEQUENCE FROM N.A. (ISOFORM 1), AND INDUCTION.
RC   TISSUE=Neonatal brain;
RX   PubMed=9426245;
RA   Matsushita N., Fujita Y., Tanaka M., Nagatsu T., Kiuchi K.;
RT   "Cloning and structural organization of the gene encoding the mouse
RT   glial cell line-derived neurotrophic factor, GDNF.";
RL   Gene 203:149-157(1997).
CC   -!- FUNCTION: Neurotrophic factor that enhances survival and
CC       morphological differentiation of dopaminergic neurons and
CC       increases their high-affinity dopamine uptake.
CC   -!- SUBUNIT: Homodimer; disulfide-linked.
CC   -!- SUBCELLULAR LOCATION: Secreted.
CC   -!- ALTERNATIVE PRODUCTS:
CC       Event=Alternative splicing; Named isoforms=2;
CC       Name=1;
CC         IsoId=P48540-1; Sequence=Displayed;
CC       Name=2;
CC         IsoId=P48540-2; Sequence=VSP_006421;
CC   -!- INDUCTION: Expression in C6 glioma cells was transiently induced
CC       by treatment with phorbol myristate acetate (PMA), but not by
CC       forskolin.
CC   -!- SIMILARITY: Belongs to the TGF-beta family. GDNF subfamily.
CC   ---------------------------------------------------------------------
CC   This SWISS-PROT entry is copyright. It is produced through a collaboration
CC   between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC   the European Bioinformatics Institute. There are no restrictions on its
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CC   or send an email to license@isb-sib.ch).
CC   ---------------------------------------------------------------------
DR   EMBL; D49921; BAA08660.1; -.
DR   EMBL; U37459; AAB18672.1; ALT_INIT.
DR   EMBL; U66195; AAB07463.1; ALT_INIT.
DR   EMBL; U75532; AAB18343.1; ALT_INIT.
DR   EMBL; U36449; AAB52953.1; -.
DR   EMBL; D88264; BAA13566.1; ALT_INIT.
DR   EMBL; D88352; BAB12221.1; -.
DR   EMBL; D88351; BAB12221.1; JOINED.
DR   PIR; I49686; I49686.
DR   HSSP; Q07731; 1AGQ.
DR   MGD; MGI:107430; Gdnf.
DR   GO; GO:0007422; P:peripheral nervous system development; IMP.
DR   GO; GO:0030432; P:peristalsis; IMP.
DR   InterPro; IPR002400; GF_cysknot.
DR   InterPro; IPR001839; TGFb.
DR   Pfam; PF00019; TGF_beta; 1.
DR   PRINTS; PR00438; GFCYSKNOT.
DR   ProDom; PD000357; TGFb; 1.
DR   SMART; SM00204; TGFB; 1.
DR   PROSITE; PS00250; TGF_BETA_1; FALSE_NEG.
KW   Alternative splicing; Glycoprotein; Growth factor; Signal.
FT   SIGNAL       1     19       Potential.
FT   PROPEP      20     77       By similarity.
FT   CHAIN       78    211       Glial cell line-derived neurotrophic
FT                               factor.
FT   DISULFID   118    179       By similarity.
FT   DISULFID   145    208       By similarity.
FT   DISULFID   149    210       By similarity.
FT   DISULFID   178    178       Interchain (By similarity).
FT   CARBOHYD   126    126       N-linked (GlcNAc. . .) (Potential).
FT   CARBOHYD   162    162       N-linked (GlcNAc. . .) (Potential).
FT   VARSPLIC    25     51       GKRLLEAPAEDHSLGHRRVPFALTSDS -> A (in
FT                               isoform 2).
FT                               /FTId=VSP_006421.
SQ   SEQUENCE   211 AA;  23662 MW;  B6731C767A3A95B7 CRC64;

  Query Match             16.2%;  Score 192;  DB 1;  Length 211;
  Best Local Similarity   28.8%;  Pred. No. 0.0015;
  Matches   64;  Conservative   28;  Mismatches   92;  Indels   38;  Gaps    7;

Qy         23 LWPTLAALALLSSVAEASLGSAPRSPAPREGPPPVLASPA-GHLPGGRTARWC-SGRARR 80
              ||  :|   :|   | |          |      :| :||  |  | |   :  :  :
Db          3 LWDVVAVCLVLLHTASA---------FPLPAGKRLLEAPAEDHSLGHRRVPFALTSDSNM 53

Qy         81 PPPQP--------------SRPAPPPPAPPSALPRGGRAARAG--------GPGSRARAA 118
              |  |               |    |    :|||| | :|          | | | :
Db         54 PEDYPDQFDDVMDFIQATIKRLKRSPDKQAAALPRRERNRQAAAASPENSRGKGRRGQRG 113

Qy        119 GARGCRLRSQLVPVRALGLGHRSDELVRFRFCSGSCRRARSPHDLSLASLLGAGALRPPP 178
              ||| | :  : |  ||||: : | : ||:|||||  | : :|  | :|  :  |
Db        114 KNRGCVLTAIHLNVTDLGLGYETKEELIFRYCSGSCESAETMYDKILKNLSRSRRLT--- 170

Qy        179 GSRPVSQPCCRPTRY-EAVSFMDVNSTWRTVDRLSATACGCL 219
              | | | ||||  : : :||:| |  :  : : ||  |||:
Db        171 -SDKVGQACCRPVAFDDDLSFLDDNLVYHILRKHSAKRCGCI 211


Search completed: March 27, 2005, 15:43:55
Job time : 86.8824 secs
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